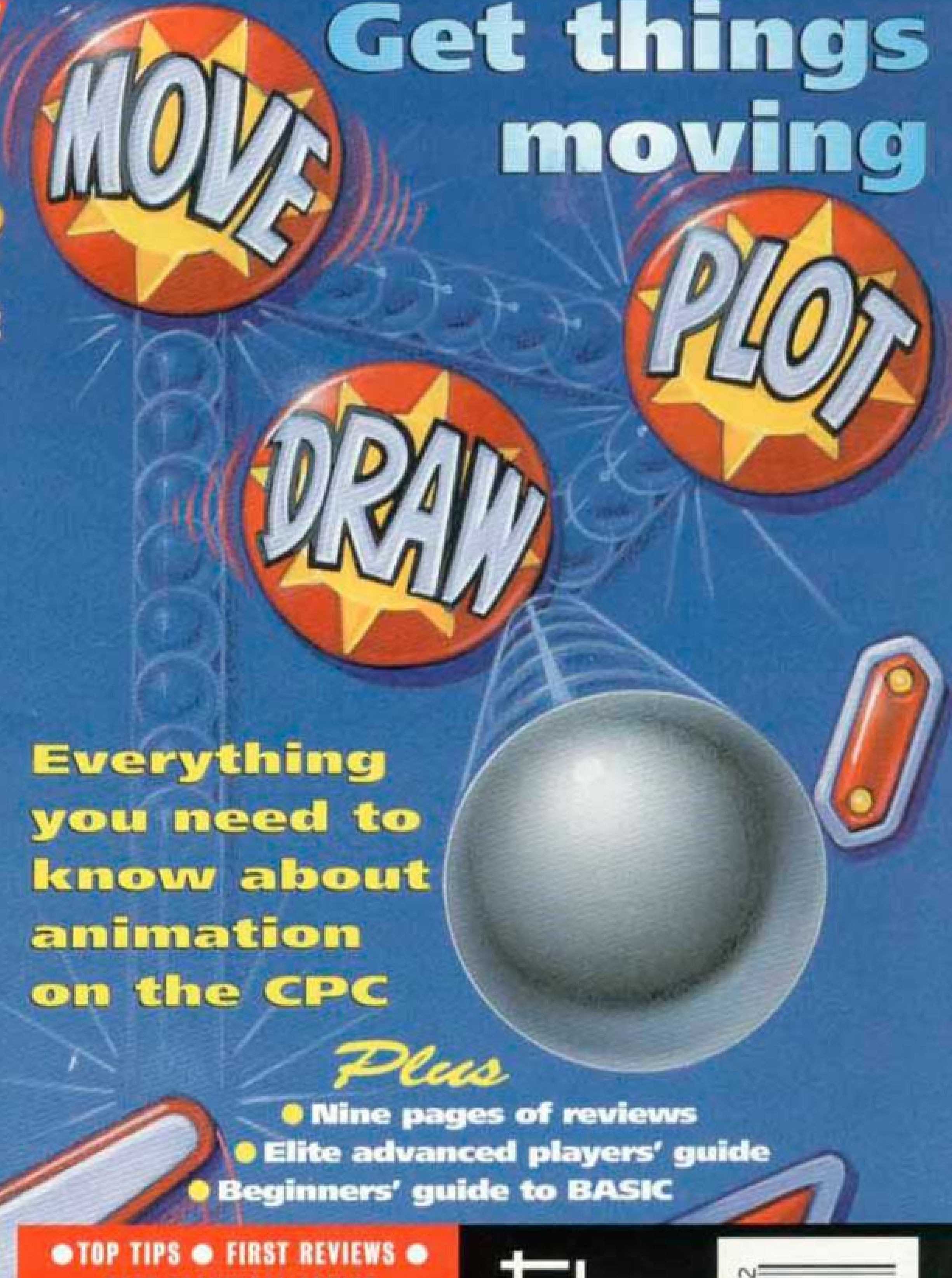
Got a CPC? Do yourself a favour and buy this mag

AMSTRAD ACTION

ISSUE No.101
February 1994
£2.95

Get things moving



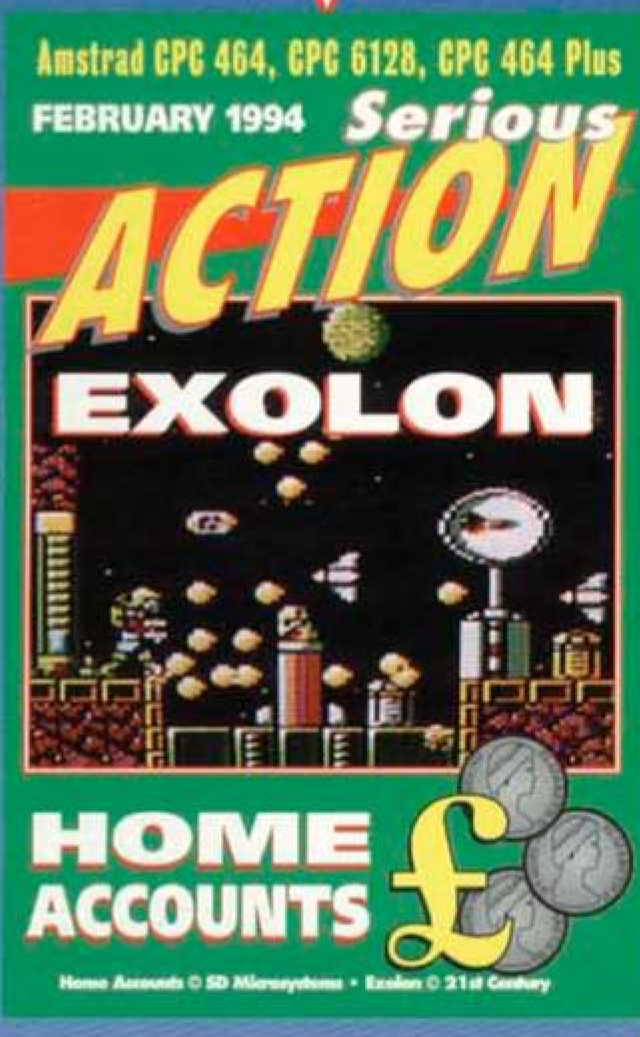
Everything you need to know about animation on the CPC

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- Elite advanced players' guide
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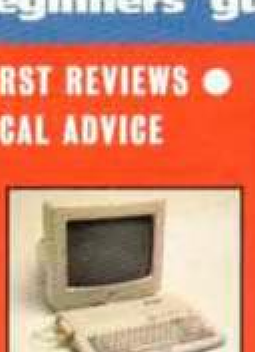
- Exolon – an AA past mastergame
- A complete home accounts package

ALL ON ONE CASSETTE



● TOP TIPS ● FIRST REVIEWS ●
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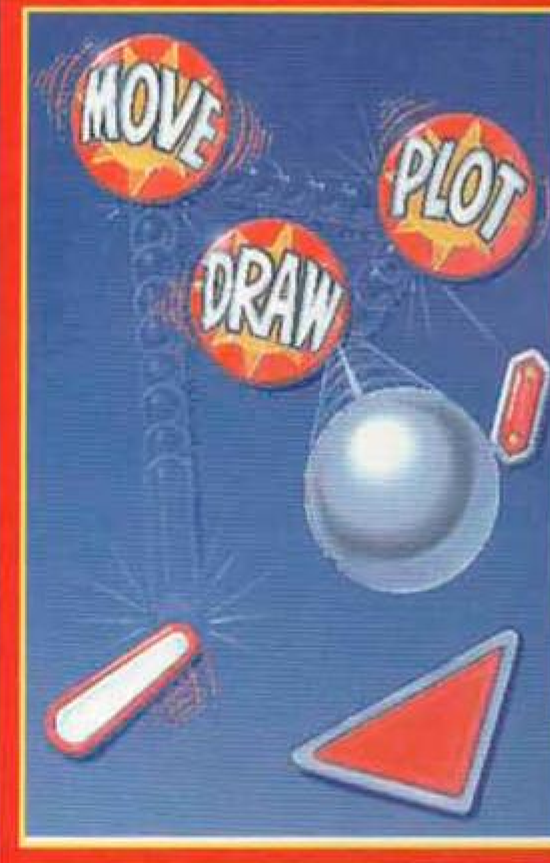

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Line-

Serious stuff

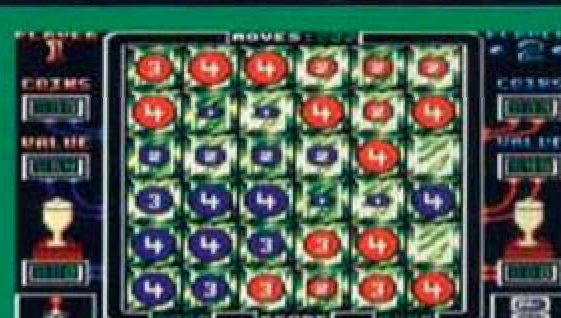


Cover feature



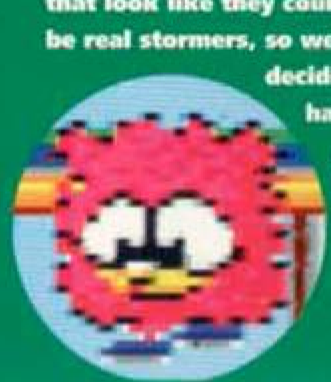
A complete commercial package for free – but you have to do a bit of hard work first – see Type-Ins.

Leisure zone



Logical is one of the PD games reviewed in this month's Public Image on page 30.





Meet Fluff. You might not have heard of her yet, but she's gonna be big.



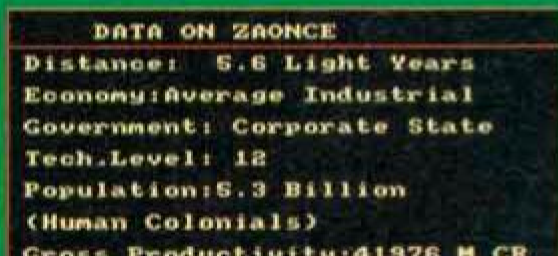


Is Switchblade one of the Good, Bad or Ugly platformers? Find out on page 42.

-up

Regulars





More than just a shoot-'em-up – Elite.

Serious ACTION



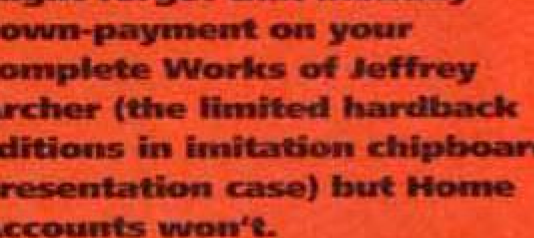
Exolon

Okay, this game is great. Okay, if you want an unadulterated blast-'em-up you can't get much better. Okay, the graphics are gorgeous. Okay it's got more missiles than a small Arab country. Okay, it's another Rafaelle Cecco game which means it's got to be a bit of alright. But, to be perfectly honest, I'm really browned off with the way that everybody's been wandering around the office saying, "AXELLOOOONNNNN!" in a cheesy, way-past-it's-sell-by-date Bill and Ted-style.

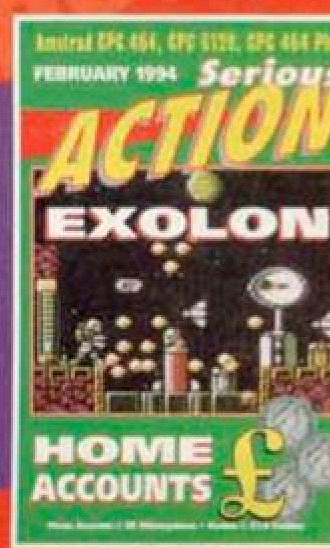


Home Accounts

Stay in the black and out of the red, you get nothing in this game... er, because it isn't a game. It's a package which helps you keep track of your personal money matters. You might forget that monthly down-payment on your Complete Works of Jeffrey Archer (the limited hardback editions in imitation chipboard presentation case) but Home Accounts won't.



Serious ACTION



It's fun, it's practical, it's portable, it's plastic, it's about the size of a pack of cards, it's not covered by the Official Secrets Act, it's sellotaped© to the front of this magazine (or, at least, it was until you ripped it off) and Clur's here to tell you what to do with it.



This is the kind of problem you don't come up against in your local DIY store every week.

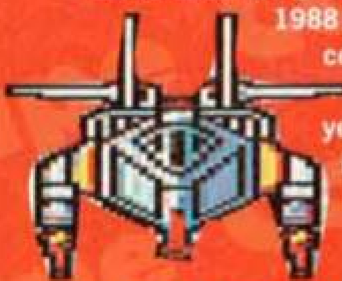
Exolon

© 21st Century Software





Tremors of excitement filled the *AA* office as we loaded up the first copy of *Exolon* back from the duplicators. All of us here remember whiling away many an hour blasting away everything in sight over 125 lush screens-worth of SF action when the game first came out back in 1988 (*AA* gave it it 93 per cent in issue 24), and we were hoping that the years hadn't robbed it of its power to impress.



They've done nothing of the sort. In fact, it was one of those games that made every who walked by the office stop and go, "I remember that – that's... er... hang on it'll come to me in a minute... I just need to play it for a moment or two." And a couple of hours later the name would come to them. We even got a few new converts to the game (probably the one's too ashamed to admit they'd never heard of it).

Ah, we all remembered the shiny suit that the main character wears and the ridiculous way he walks. But what we had forgotten was how darn tough it is to beat. Mind you it's about time we gave Dave something a little more challenging to play than *Klax*.



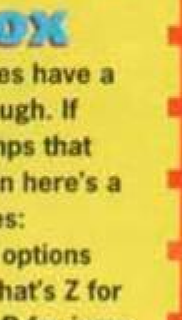
It's one small step for a man, but one hell of long way down if you miss your footing.

Basically, you've got to blast everything in sight, with either of your two weapons. Your laser gun will kill most of the smaller moving aliens, but to kill the bigger baddies, guns and bits of rock in your way you'll need to hold the fire button down long enough to tell your backpack to release one of its deadly missiles.



You can define keys or joystick directions as the movement and fire controls, or use a mixture of both. Try inviting your mate to play a championship but set his controls to stupid joystick directions (eg, pushing left to make the gun fire) and watch him squirm.

You'll find some things, however, that you won't be able to kill with either weapon. For example, there's a particular type of rocket that is controlled by a green blobby thing on a stick; you need to destroy him before the rockets will stop bugging you.



There are teleport pads plonked all over the place. Step into in one, hold jump and you'll be magically transported to another pad. Also, look out for what appears



Basically, we've spent nearly two pages explaining a game that really only has one rule – if it moves, blast it to pieces.

Cheat Box

Okay, I'll admit it, *Exolon* does have a reputation for being fairly tough. If you're one of those girly wimps that can't handle a challenge then here's a cheat to give you infinite lives:

Hit 2 to enter the control options screen, then enter ZORBA (that's Z for move left, O for move right, R for jump, etc). Once you've done that you should be back on the title screen. Hit 2 again and enter the controls you want to play with (joystick or keyboard). Now, when you hit 1 to go into the game, you should be blessed with infinite lives.





I reckon this bloke is a right sloane out of that space suit. I mean, come on, he hasn't even bothered to take his green wellies off.



to be a pointy red teleporter standing all on its own. Jump into this, press up and you'll be kitted out with an industrial strength protective suit and a smart double-barrelled gun (which are, strangely enough, just right for getting past the gun turrets that fire pairs of bullets at you).

There are 125 screens in all, split into five sections. Watch the counter at the bottom of the screen to see how far you've got to go. You can't go back once you've travelled through a screen and if you cop it your restart point is at the beginning of the screen on which you died. If you do get incredibly stuck check out the cheat printed on this page, but have at least one go at getting through all 125 on your



own. Think of the sense of achievement. You'll want to climb Everest dressed only in a Leeds United scarf and a pair of blue Superman boxer shorts after that. Maybe.

Stormlord loader

Ever seen *Gremlins 2*? Darned fine film. Miles better than the first one. I love the bit with John Wayne in the video version especially. Anyway, there is a point to all this. It's a way of delaying the fact that we have to admit that some gremlins got in the works on issue 99's covertape and the tape-to-disk loader went walkies. Don't panic, because we have made amends. A listing for the loader is included in this month's Type-Ins which begin on page 32. Strange how we used to have type-ins on the tape, now we've got covertape programs in the Type-Ins section.



Something tells me that I should have taken the other turning and got on to the low road.



Those strange arch things are, in fact teleport pads. They come in pairs and you can only teleport between each pair.



If you can keep your head while all about you are losing theirs, you've obviously fallen through a time warp to the French Revolution.

The Vox Box

Exolon is one of those games that people walking past the office just had to stop and comment on. Here are a few of the printable remarks that were made:

Rod Lawton (ex-AA Ed) If they wrote games like this today, the Amstrad's future would be assured.

Trenton Webb (Ed – Game Zone) One of Raf Cecco's first and one of his finest.

Harry Webb (pub singer) *Exolon*'s so good I almost wrote my 1993 Christmas song all about it.

Mary Whitehouse (retired) The amount of violence evident in the video games of today disgusts me. It really does.

Marcus Dyson (Ed – Amiga Format) I get scared just hearing the music.

Maff Evans (lead singer of cult industrial band Maschine Manitou) All I remember was the smart shiny space suit.

Simon (Hairy – AA) If you survive for more than 10 seconds you'll be having fun.

Dave (what do you mean, which Dave?) It got the oil stains out of my shirts better than my old powder did.

Stuart Campbell (not the editor – Amiga Power) Erm... it was very popular wasn't it? Everybody else I knew loved it.

Andy Butcher (reviewing bloke – PC Gamer) Probably the smartest bloke-in-a-space-suit-wandering-around-killing-things game ever.

Loading instructions

Getting started

To load up either side of the tape, simply rewind it, hold down CONTROL and press ENTER. Owners of 6128s or 664s will have to switch their machines to tape by typing |TAPE first. *Exolon* should load without any fussing about, but *Home Accounts* needs a little more love and attention.

The main bit of the program should load as normal and then it will prompt you to press play and hit any key. As soon as you see the prompt hit a key then immediately reset your tape counter to zero. The program should now load a couple of programs called COL and NAMFL. If for some reason it doesn't simply rewind the tape 'til the counter reads zero and try again.

Disk not tape

If you've got a disk drive and you want to get a disk version of this month's tape then it's easier than falling off a log in a gale force wind. Whip out your scissors and chop off that token down the bottom of this page, chuck it in an envelope along with your name and address on a slip of paper and a cheque or postal order for £2 made out to Ablex Audio Video, then send off the whole kit'n'kaboodle to:

AA101 Disk Offer,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD.

Loading troubles?

We make the greatest efforts to ensure our covertapes work properly, but if you're having problems loading the tape try out these solutions:

- Load at several different volume levels (if you're loading from an external tape recorder).
- Clean the tape heads (a drop of isopropyl alcohol on the tip of a cotton wool bud is best).
- Adjust the tape player's head alignment by twiddling the screw to the left of the tape head just a little bit at a time.
- Tap the cassette, very gently, on a hard surface – the spools might be jammed.

If you've tried all that and your tape's still not loading then pop it in the post (include your name, address and a brief description of the problem) to:

AA101 Covertape returns,
Ablex Audio Video,
Harcourt, Halesfield 14,
Telford, Shropshire TF7 4QD

Please do not return faulty tapes to the AA office. There is no point. We cannot replace them here. Send them to Ablex, not us. Send them to us and it'll take you twice as long to get your tape back (if at all), and it's much more likely to go missing in the post... or get eaten by Simon.

Disk 101 Token

Home Accounts

Money makes the world go around. It makes quite a few heads go around too. So if keeping track of your financial matters makes your head spin, Home Accounts is the solution.

We all know that having money is great, but it's darn difficult when you're running on a tight budget to keep track of where all your money goes. That's where *Home Accounts* comes in handy. The program can keep track of all your incomings and outgoings and keep an eye on all your accounts (even credit cards). *Home Accounts* will even keep track of exactly what you've spent your money on and when you've spent it.

It's operated through a series of easily accessible menus all controlled via the keyboard. There's a multitude of options, outlined below, all of which are invaluable to the penny pincher.

When you first load up the program you'll be asked to input the date (e.g. 0301 is the third of January, 1411 is November 14the). Then you'll be asked for a password – there's an option to choose one later, but for the moment just hit return to get into the program proper.

The best thing to do the first time you use the program is to load the data named SAMPLE (hit 6, then 2 and type in sample and press return). Once you've loaded the data just play around with it – enter made-up transactions and standing orders, get print outs of the account statement and fiddle with the colour preferences.

What's on the menu?

Each menu is accessed by hitting 1-10 on the keyboard. These menus are outlined below, grouped according to their locations within the program. For example, if you wanted to change the on-screen colours hit 1 on the main menu to access the account codes/utilities menu, then hit 2 to access the colour change section.

1 Account codes/utilities

1 View/amend codes
Every transaction needs coding, according to whether it is one of 40 types. These transaction codes can be altered to suit your particular needs.
2 Change colours
Enables you to choose your preferred colours for the background and text.
3 Change password
The password is there to help you keep your financial matters private. If nobody else has access to your CPC disks then it isn't really worth using a password since there's always the chance you might lose it.



These figures are made up, by the way. Dave would never pay me that much a month.

2 Data Entry

1 Credit item
- Date
- Amount
- Detail
- Reference
- From account
- To account
- Confirm (Y/N)

2 Debit item
See operations above in Credit item.
3 Transfer funds
This enables a transfer of funds between one account and another, for example a transfer of funds into a savings account to your current account.
4 Delete item
If you ever find you've made a mistake, you can delete any entry.
5 Mark entries
If you're checking your monthly statement from the bank then mark entries off against it using this function. M marks the entry, N moves on to the next entry and Q quits this option.

3 Reports Module

1 Ledger listing
This option will give you an audit trail – a double entry version of all entries.
2 Single account listing
Choose this option to list only those items concerning a particular code (1-40)



This'll give you an at-a-glance idea of what the program has to offer, unless you're short sighted in which case it's an at-a-squint

3 Net worth
A quick guide to the overall state of your money matters.

4 Statement

Gives you a simple income versus expenditure comparison.

5 Column totals

This gives you the totals of each particular account.

6 File operations

1 Save transaction file
After adding any entries to your file you'll need to save the data for future reference. Never leave the program without saving otherwise all your alterations will be lost.
2 Load transaction file
3 Catalogue a disk
4 Change drive
5 Save NAMFL
NAMFL is a support file containing all the information like colour choice, password and account headings. It auto loads when you run the program. If you amend any of the above information then you should save NAMFL on to the program disk.
6 Erase files

7 Standing orders

1 Enter standing order
2 Cancel standing order
3 View standing order table
4 Generate standing orders

8 Date scrolling

9 Start new period/reset file

10 Exit from program

Income support

If you do have problems SD Microsystems run a support service which they charge £12 per year for. This means you'll get advice, news sheets and discounted supplies.
Send an SSAE to SD Microsystems, PO Box 24, Holbeach, Linconshire PE2 7JF for more information on the service.

Printing

You can send reports to the screen or to an Epson compatible printer. Simply reply Y or N to the prompt OUTPUT TO PRINTER? And the program will give you a full print out of the information you requested.

Amscene

What's hot and not what's not on the CPC news front.

Under pressure



Dave is great, Dave is fab, Dave is good-looking, Dave is a wonderful human being, Dave is writing this caption.

You might think that issue 101 must be a bit like the calm after the storm, but far from it. Blimey, I thought as I picked the hairs out of my cornfalkes the other morning, this has got to be the maddest issue I've worked on yet – because of Christmas and the new on-sale date (starting this month we're going to be on sale every third Thursday of the month) issue 101 had to be thrown together in less than two weeks – no easy task.

But, as is often the way with these things, the pressure has actually produced some stunning results – this issue is packed with features that'll appeal to all CPC users from the serious tech-head to the serious games-player. The leisure side of the machine is really picking up again it seems, which is darned good news indeed. But if you're wandering what happened to the French games we said we were going to review this issue, they unfortunately fell victim to the tight deadline (and the language barrier). C'est la vie. Dave

Campursoft ease the transition

A new tutorial package designed to help BASIC-proficient programmers make the transition to Machine Code is set for release in February from Campursoft.

BASIC Idea will comprise a booklet and a disk. One side of the disk will contain code that will explain sections in the booklet. The other side of the disk will feature a game based on the routines contained on the other side.

A final price for the package has yet to be announced but Campursoft expect it to sell for about £15. Campursoft can be contacted on ☎ 041 554 4735.

● Campursoft are also on the look-out for new programmers. If you've written a program you think might be of marketable standard contact the company on the number above.

DESirable desktop

Campursoft (is anybody else doing anything this month?) revealed their soon-to-be-released ROM-based desktop environment to the public for the first time at the Glasgow All-Format's Computer Fair in December.

The Mac-style front-end is provisionally called DES (Desktop Environment System). The name is likely to change because, according to Campursoft's Peter Campbell, "it isn't really catchy enough."

According to Campbell *DES* was given an almost unanimous thumbs up by CPC users at the show. He reckons that it should be generally available by the start of February.

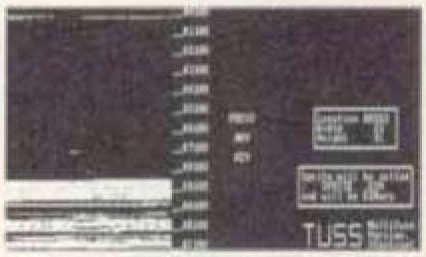
Campursoft is contactable on ☎ 041 554 4753.

Cheap sporting action

The cart pricing war starts here (well, perhaps). Campursoft are selling the Epyx *World Of Sports* cart for a mere £6.99. Contact Campursoft on ☎ 041 554 4753.



A rather picturesque but only slightly relevant shot that fills the gap left by lack of hard news.



The Ultimate Sprite Searcher will be part of The Hack Pack.

Compiled hacking

Sentinel are set to release *The Hack Pack*, a compilation of three programs in early February.

The pack will comprise *The Ultimate Sprite Searcher* (reviewed in *AA97*), *Soundhakker* and an as-yet unannounced disassembler.

The pack will retail for around £15–£20. Contact Sentinel on ☎ 081 876 7032.

PD news

Two major releases are just about to hit the Public Domain scene. First off there's a simultaneous four-player game (this we have got to see) called *Megablasters* which is being coded by Odiesoft.

Also coming to a PD library near you is the latest demo from the European demo masters, Beng. It's called *The Wonder Demo* and is, according to people who like that sort of thing, the group's best offering yet. Yeah but what's the gameplay like..? er, forget I said that.

Buying goods through mail order

There are loads of great bargains to be found in the ads and classified ads in *Amstrad Action*. But some of you may be a bit reticent about sending money through the post for goods you haven't seen to someone you've only talked to over the phone. But don't panic. Just follow our simple guide to buying goods by post and you can't go wrong.

● Before ordering anything try to contact the company by phone to check that the product you want is in stock. Write down a list of questions you want to ask them, such as compatibility, price, postage costs, etc.

● Check about a delivery date (ask how long it will take before you should receive the goods).

● Never send cash through the post. If possible use a credit card because that will probably give you some form of insurance coverage. Failing that, use either a postal order or cheque.

● Beware of any companies that seem to leave their answer phones permanently switched on or firms that don't put a phone number or address in their ads.



● Keep records of correspondence or phone calls with the company – dates, terms agreed, etc.

● If a problem does occur the first place to contact is the company causing the problem. Be calm, and explain clearly what the problem is. Most faults are just mix ups and can be sorted out.

● If, however, you still have problems write to *Amstrad Action*'s advertising department at the following address:
Alison Winter,
***AA* advertising department,**
Future Publishing,
30 Monmouth Street,
Bath, Avon BA1 2BW.

The Amscene Directory



It's that useful-addresses-bit-of the- magazine again. These are the people, companies and fanzines who are hot (or, at least, comfortably warm) on the CPC scene. If you reckon you're reasonably piping as well,the place to write to is Amscene Directory, *Amstrad Action*, 30 Monmouth Street, Bath, Avon BA1 2BW and we'll make this the most comprehensive list of CPC services in the known universe (it probably is already, but we don't like to boast).

PD Libraries

Amsof
Lissanly, Cloyne, Middleton, Ireland
Large range of European stuff.

Colrob PD
9 Aviemore Road, Hemlington, Middlesborough
New tape-only PD library

Dartsma
☎ 081 317 1170
And they do loads of other CPC-related stuff as well.

Demon
47 Hilton Avenue, Hall Green, Birmingham B28 0PE
3.5-inch disk drive owners might like to investigate.

Disk PD
Lower Dexbeer, Dexbeer, Holsworthy, Devon EX22 7LA.
☎ 0288 82348
Small but perfectly formed.

GD PD
49 Woodville, Barnstaple, Devon EX31 2HL
New library with a large selection.

PD Fun
41 Michaelgate, Kirkby Lonsdale, Via Carnforth, Lancs LA6 2BE
A policy of 'no serious software.'

Presto PD
119 Pwll Street, Landore, Swansea, West Glamorgan SA1 2PB.
The only library to offer stuff on 5.25-inch disks (as far as we know).

Signal Software
83 Longleat, Great Barr, Birmingham, West Midlands B43.

Sheepsoft
☎ 0446 736529
Based in Wales, of course. Baaaaa

The Vault
43 Windfield Gardens, Clybaun Road, Galway, Ireland.
☎ 010 353 91 28204
A new but rapidly expanding library with lots of European software. There's a special two-selections-for the price of one (25p) offer until the end of January.

Fanzines

CPC Now!
☎ 0353 663030
Issue five of this rapidly expanding fanzine is due any time now. Entrepreneurial editor James Hockney promises even more big changes to come. Check out the review on page 54.

The Eliminator
14 Station Road, Riccall, York, North Yorkshire YO4 6QJ
We don't really know much about this one because no-one's actually sent us a copy yet (hint, hint).

WACCI
☎ 0602 725108
Buy it and find out how many rude comments they make about us (but marvel at the depth of technical knowledge at the same time).

CPC User
☎ 0329 234291
The UAUG's fanzine.

CPC Undercover
37 Trimingham Drive, Brandlesholme, Bury, Lancashire
An technically-minded Fanzine that's also on the look out for writers.

User Groups

Amstrad Contact
☎ 0403 753348
Sussex-based group run by Dave Muggeridge with a technical helpline.

UAUG (United Amstrad User Group)
☎ 0329 234291
An *AA* recommended user group.

Independent Software Companies

Avatar
☎ 0442 251705
Suppliers of Phil Craven products, and a few of the Bonzo titles (and don't ask what Bonzo titles are – it'd take too long to explain).

BoxForm
☎ 051 336 2668
A software house specialising in, would you believe, betting software. It takes all sorts in this world.

Campursoft
☎ 041 554 4735
You name it, they do it, really – take a look at the interview in ish 96.

Gary & Scott Kennedy
☎ 061 736 1204
Authors of *Trakers*, a truly great CPC game (don't argue).

New Age Software
☎ 01049-711-4201920
Responsible for the dull *Zap'T'Balls*, the excellent *Soundtrakker*, and hopefully a few more titles.

Quantum Computing
☎ 0446 746920
The new breakaway sect of STS that looks set to pick up where the original good plans fell short.

SD Microsystems
☎ 0760 720381
Specialists in business software – take a look at the feature in *AA*93.

Sentinel Software
☎ 081 876 7032
Suppliers of selected STS titles and a few original products. They don't arf churn 'em out.

Siren Software
☎ 061 724 7572
It'd take a hell of a time to list everything they do – check out their ad (it's the yellow half-page one).

STS ☎ 0446 746920
This lot deal with S/DOS, *The Dizzy Utility, Disc Imager, Disc Archiver.*

The Big Softies

So you can ring them up and hassle 'em about releasing some new stuff.

Alternative Software
☎ 0977 797777

CodeMasters ☎ 0926 814132

Gremlin/GBH ☎ 0742 753423

Ocean/Hit Squad ☎ 061 832 6633

Titus/Fox Hits ☎ 071 700 2119

Touchdown ☎ 0268 541126

Virgin ☎ 081 960 2255

US Gold/Kixx ☎ 021 356 3388
Ask 'em where *Street Fighter 2* has got to.

Zeppelin Software ☎ 091 385 7755

Hardware

Romantic Robot
☎ 081 200 8870
Creators of the Multiface – There's a complete list of cheats in *AA*90.

WAVE ☎ 0229 829109
Suppliers of loadsa good stuff – their ad is on the back cover.

Microform ☎ 0772 703131
Drives, upgrades, disks, all sorts of techy stuff like that.

Mail Order

Trading Post ☎ 0952 462135
Great for cart games (see page 42).

Trojan ☎ 0554 777993
The people to speak to for cartridge and lightgun stuff.

Upgrades and Repairs

STS ☎ 0446 746920
These guys'll do anything. Well, within reason, of course.

Make sure you never miss out on the Action

The secret of success is planning, so if you want to successfully secure the next issue of *AA* plan ahead now. Get your handy local newsagent to order you a copy of the mag. That way you'll guarantee that a) he won't sell out and you'll have to trudge around town looking for a copy, b) your copy will be in pristine condition and c) life will in some small way be better.

MAG*SAVE

MAG*SAVE

Dear Newsagent,
Please order me a copy of Amstrad Action every month.

My life would not be worth living without *AA* every month so it would be hunky dory if you started saving me a copy on a monthly basis starting with the March issue, which'll hit the shelves on February 17th. *Amstrad Action* is published by Future Publishing who earn you a lot of money by producing such a lot of brilliant mags (just thought we'd mention that).

My name..

My address..

....

....

CPsCene

The page you (will) write



Every month you run out and buy your AA and read what we have to say. Now it's your turn to have your say, and here's Clur to tell you how to get your name in print.

Dave's always having phone calls and letters from budding writers trying desperately to impress him enough to give them a job. Well now here's your chance to have your scribbles printed in the magazine, with your name printed right there at the bottom.

Every month we're going to dedicate a page to all those hopeful young journalists out there. It's going to be *Amstrad Action*'s very own fanzine page... sort of. All you have to do is send your piece of prose in to us and we'll pick out the most interesting ones to print. We do have to set a limit of 250 words per article (that's about one side of A4 lined paper), just so we can fit more than one on a page. Your articles can be about anything you want: hardware reviews, software reviews, general CPC stuff, programming, in fact anything at all.

Send your scribblings in ASCII format on disk or tape, or written out neatly. Address them to: **CPsCene, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath BA1 2BW.**



Corrections

If you could see some of the copy I hand in to Dave you'd be rolling around the floor in fits of giggles. Sometimes when you're on a roll your English grammar goes out the window (we use spell checkers so that side of things isn't usually too bad). So if your article does appear in print, don't get all upset when it doesn't have exactly the same words as you sent us. Ask Simon and he'll tell you that his copy is in perfect condition when he gives it to Dave and even his gets subbed before it goes in the mag.

DON'Ts

DON'T go over the 250 word count.
DON'T send us old news articles.
DON'T just re-write old AA pages.
DON'T expect to get paid (*Dave told me to put that one in – Clur*).
DON'T write your piece like an English essay – relax, and write informally, but clearly.

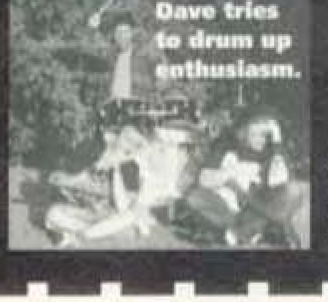
DOs

DO write legibly, if we can't read it you've got no chance. Type or print it out from a word processor if possible.
DO bear in mind prices if you're doing a review.
DO send an SSAE if you want your masterpieces returned to you.
DO be careful about what you say – tell the absolute truth. We won't print personal abuse.
DO include information on where to get hold of the products you mention.
DO have fun when you're writing – that's the whole point (well, it is if you're not getting paid).
DO send relevant pictures in if you can, it'll help cheer up the page a bit.

Win an Amdrum

As Dave would surely tell you there's nothing finer than the sound of a real drummer playing real drums. But say you and your mates are having problems finding anyone with an ounce of rhythm to be the drummer in your band. What do you do then? Throw your one chance to have a shot at fame and fortune out of the window? Nope, you enter this excellent competition and have the chance, courtesy of *CPC Now!*, to be the lucky winner of one of three Amdrums, the funky drum machine for the CPC.

The Amdrum bypasses the CPC's (admittedly not state-of-the-art) in-built sound chip completely and uses an enhanced chip inside a plug-in module instead. The drum kit provided with the Amdrum is a set of six sounds which can be programmed to play in a particular sequence. Then that sequence can be played back in a loop (over and over again). The Amdrum's not MIDI compatible but it does have synchronisation features which enable you to easily transfer drum patterns on to multitrack recorders. Fab huh?



Dave tries to drum up enthusiasm.

The Compo

So, to win one of these fantastic drum machines all we're asking you to do is write the *AA* Rap (a couple of four-line rhyming verses will do). Simply scrawl the lyrics on a piece of paper and send it to us. We'd love to hear the raps performed by their creators, but if you do send us a tape can you include a lyric sheet too, 'cos Andy's hearing isn't too good these days.

If you aren't one of the lucky three to win the top prizes there are 10 runners-up prizes of copies of *Street Rally* the game (see page 56 for a review) or a year's subscription to *CPC Now!* (see page54).

Clur will be judging the entries so get them well before the closing date of Thursday 31st March, she tends to be quite strict on these matters. Get rappin'!

The address

Send your entries to: **AMRAP, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.** Don't forget to tell us who you are and where you live, otherwise there's absolutely no chance of you winning one of these great prizes.



Amdrums are available from CPC Now! See Amscene for the address.

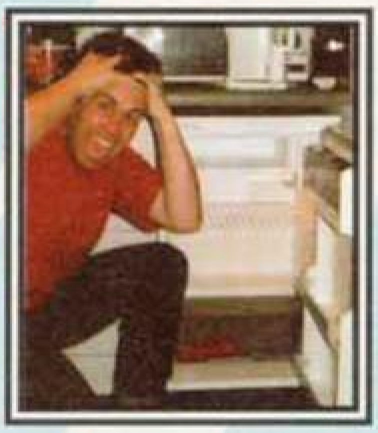
The rules

- Clur's decision is absolutely final (and she's got bizarre taste in music so beware).
- No one from Future Publishing is allowed to enter, so there.
- Nor is anyone who was stupid enough to buy Mr Blobby's single either.
- We aren't going to put the best raps on the covertape so don't even bother to ask.

Power Up

Here's the totally gratuitous "here's us, we're fab" page in which we delve deep into the souls of the fantastic four that bring you your favourite Amstrad magazine every month.

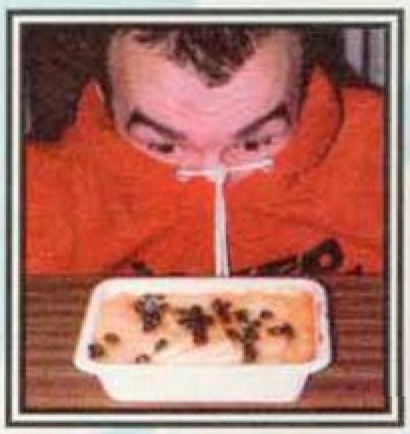
As it's issue 101 we thought we should face our greatest fears in Room 101 (if that doesn't ring a bell then you should be reading more Orwell) and take part in the ultimate experiment in aversion therapy.



DAVE GOLDER
Mr Ed

Deepest darkest fear: Having an empty stomach and finding that the fridge is devastatingly empty.
Scariest movie: *Videodrome* (but the blood test bit from John Carpenter's *The Thing* is the scariest individual sequence in a film ever).
Best horror story: *Amstrad Action* deadlines
Fave toon: Droopy.
Ideal Valentine: Wilma Flintstone (it would have been Betty but I reckon she dyes her hair).

ANDY OUNSTED
Arty party-goer



Deepest darkest fear: Being force-fed sultanas, raisins, currants or anything else that's shrivelled up and tastes like it should be used to surface roads.
Scariest movie: *The Sound of Music – The Director's Cut* (all those nuns and Nazis – aaaarrrrgh).
Best horror story: *Amstrad Action* deadlines.
Fave toon: Muttley.
Ideal Valentine: Rachel Ward (the sophisticated strumpet from *Dead Men Don't Wear Plaid*).



SIMON FORRESTER
Hairy half-wit

Deepest darkest fear: Spiders (and if anyone dares to buy me a copy of *Arachnophobia* for Christmas they're dead).
Scariest movie: *Homeward Bound*.
Best horror story: *Assassin* by Shaun Hutson.
Fave toon: *Buster Bunny*.
Ideal Valentine: Someone who lets me sleep all day.

Separated at birth



Ulopa Cariken, star of Twin World from UBI Soft.

Our very own Editor, Dave 'Teeth' Golder.

Spooky isn't it? The short legs, the stubble, that enigmatic smile and those teeth. An even spookier fact is that Dave is always telling us that his very favourite colour is that very shade of green! If you think you know anyone who looks like a game character, write in to us at: *Amstrad Action*, Future Publishing 30 Monmouth Street, Bath, Avon BA1 2BW.



CLUR HODGSON
Tea-maker

Deepest darkest fear: Hypodermics, even the sight of a needle on the telly and I pass straight out.
Scariest movie: *The Fly* (it's so scary I refused to go and see it with all my mates and went to see *Batman* on my own instead).
Best horror story: The Simpson's version of the Edgar Alan Poe classic *The Raven*.
Fave toon: Wile E. Coyote
Ideal Valentine: The lad who played in the number 15 shirt in the Gloucester Jets basketball team around 1986/87.

AA Trump Cards # 4

For you to cut out and put with your other three. Now you can play four-player trumps even without an expensive adaptor.

Street Fighter Ken
US Gold



Cloying cuteness factor	0
Appearances	1
(Hah! When will US Gold learn?)	
Hardness	0
Street Cred	6
Quality of games	1
Resemblance to a deckchair	2
Overall AA totally biased rating	-30*

(* Not that we're at all bitter, you understand.)

MOVING

Get ready for a truly moving experience as Simon Forrester gives you the ultimate guide to animation on the Amstrad.

Can you believe your eyes? Not always. It's all a trick, you know, this animation lark. What you're watching isn't actually moving at all. It's a series of separate still images. If they flash up fast enough then this creates the illusion of movement; your brain's a bit slow on the uptake, y'see. And this is as true for computer animation as it is for traditional *Bugs Bunny*-style cartoons (though it never seemed to quite work in *Roobarb and Custard* for some reason).



So we're going to show you how to bring your inanimate lumps of pixels to life. We'll be covering anything that either moves, changes, or looks as if it might do either at some point in time on the CPC. This isn't going to be a complete guide to writing a game, as we're going to deal purely with making things move this month (with a bit of luck, Dave might just let me do a series on music, collision detection, etc). Anyway...

Over the next few pages, you'll find full details on the following:

- Moving objects around the screen
- Palette switching
- Changing object appearances
- Co-ordinating movement and animation
- Sprite handling
- Simple video sequences

The basics

First up, let's take a look at standard animation, and get things moving. Animation can be split into two main fields:

1 Moving objects around a screen.
2 Animating the appearance of an object.

In most cases of computer game animation, both types are combined – the character moves across the screen (type 1) by moving its legs (type 2), thus giving the appearance it's actually walking. Of course, there's no point in us dealing with both types at once, so we'll go through them one at a time. Bear in mind also that we won't be concerning ourselves just with a little man running around – we're going to start with the basics and work our way upwards.

Moving objects



Right, let's start simple, shall we? Here's a short program that should get you into the swing of things:

```
BAIP 10·MODE·2
DACM 20·FOR·x=1·TO·79
DAAG 30·LOCATE·x,10
BAPO 40·FRAME
EAKL 50·PRINT·"·";CHR$(250)
CANF 60·NEXT·x
```

Now, what could be more straightforward than that? Tell you what, let's run it, and see what it does. As you can see, a little blokey chips it from the left-hand side of the screen over to the right. Of course, this is only the very

Why all the BASIC?

That's probably a question the more advanced programmers among you will be asking quite a lot over the next few pages. The reason that all the examples you'll find are in BASIC is primarily so that everyone can try them out, and secondly because all I'm trying to illustrate is principles, not actual coding examples. At the end of all this, you'll find a good *little sprite routine*, but for the bulk of this whole thing, you won't really need it anyway.



THE LISTING

As you'll find out by reading the main feature, the ability to handle large, colourful sprites is essential for all good animations. This, then, is the listing for assigning extra commands to BASIC, allowing you to handle sprites.

As you can see, both the assembly and BASIC versions of the program are listed here (the Assembly listing isn't Zapp compatible, but you can still just read and learn).

The other thing that may strike you is that this listing, though giving a reasonably fast sprite system, still isn't as fast or as comprehensive as it could be. I'm toying with the idea of convincing Dave to put a full sprite package on the covertape (probably mine, but my darned fast version), but until that time, you'll have to make do with this (still perfectly reasonable) listing. The reason it's not as quick and professional as it could be, is so that beginners to the world of machine code will be able to follow it roughly. Anyway, here we go with the Assembly listing:

```
        ; RSX simple sprite thing

        org &9000
        limit &a000
        write "sprite.bin"
        nolist

        ld bc,comtab
        ld hl,combuf
        call &bcd1
        ret
.combuf:ds 4

.comtab:dw namtab
        jp sprdef
        jp sprdis

.namtab:db "SPRDE","F"+&80
        db "SPRDI","S"+&80
        db 0

.parget:ld a,(ix+0)
        scf
        ccf
        rla
        rla
        ld (sprlen),a
        ld a,(ix+2)
        ld (sprwid),a
        ld a,(ix+4)
        ld (spryps),a
        ld a,(ix+6)
        dec a
        ld (sprxps),a
        ld l,(ix+8)
        ld h,(ix+9)
        ld (spradr),hl
        ret

.getlin:dec a
```

PICTURES

basics of computer animation we're doing here, but let's take a look at this program.

First, there's a command in line 40 that you might just be new to – FRAME. To understand the way in which FRAME works, you ought to take a look at the boxout called 'Frame Flyback' elsewhere in this feature. For now though, let's replace that FRAME command with the following:

```
40·FOR·d=1·to·500:NEXT·d
```

As you can probably work out for yourself, this is just a line to slow the program down. If you run the program with this line there instead, you'd be able to see that instead of moving smoothly, the bloke is actually clunking across the screen one character square at a time (in other words slow enough for your brain to work out what's going on) – it's only when it's sped up that you don't notice this as much.

Take out line 40 altogether and run the program again. As you can see, as well as being way too fast, it's also incredibly jerky. That's another one for the 'Frame Flyback' boxout on the next page, methinks.

This is an example of very simple animation – we've just made something fly across the screen. There are a few problems, however:

1 It chugs along into character squares, not so much moving as disappearing from one square and reappearing in the next one along. Sure, all computer animation depends on this method, but the distance the character moves each time is usually much less.

This problem is very simple to solve – let's take a look at a different method of displaying

The best

If you want examples of what you're trying to beat (I love competitive attitudes), you'd better check out the following slices of software – what we consider to be the most impressively-animated games ever to hit the CPC:

Total Eclipse

Way back in the dawn of time, a new type of game was formed on the CPC, called *Driller*. In this ground-breaking game you explored a rather groovy little filled-3D environment. Since



Freescape was actually developed with the aid of a CPC and a bathtub full of Lego®.

then there have been loads of games using the *Freescape* system – as this 3D system became known. Undoubtedly one of the best was *Total Eclipse*, because the graphic routines were refined to such a huge extent, and also because it combined them with slightly faster action.

Prince Of Persia

This game gets mentioned for a totally different reason – the animation of the main character is



Prince of Persia – baggy trousered action.

amazing, as he can run, walk, crouch, fall, skid, swing, climb, fight and die, all in beautifully animated, life-like movements. As far as animation goes, this has to be one of the best CPC releases so far.

Prehistorik 2

Well, would you believe it? *Prehistorik 2* is mentioned yet again – this time for the scrolling, which, as well as being four-way, is the smoothest ever achieved on the CPC. It's also a wonderful game with excellent graphics anyway.



The astounding Prehistorik, with its wide array of sprites and backgrounds.

```
        ld l,a
        ld h,0
        add hl,hl
        ld de,sprtab
        add hl,de
        ld e,(hl)
        inc hl
        ld d,(hl)
        ex hl,de
        ret
.sprtab:dw &c000,&e000,&c050,&e050
        dw &c0a0,&e0a0,&c0f0,&e0f0
        dw &c140,&e140,&c190,&e190
        dw &c1e0,&e1e0,&c230,&e230
        dw &c280,&e280,&c2d0,&e2d0
        dw &c320,&e320,&c370,&e370
        dw &c3c0,&e3c0,&c410,&e410
        dw &c460,&e460,&c4b0,&e4b0
        dw &c500,&e500,&c550,&e550
        dw &c5a0,&e5a0,&c5f0,&e5f0
        dw &c640,&e640,&c690,&e690
        dw &c6e0,&e6e0,&c730,&e730
        dw &c780,&e780

.nxtlin:ld de,&800
        add hl,de
        ret nc
        ld de,&c050
        add hl,de
        ret

.sprdef:cp 5
        ret nz
        call parget
        ld a,(spryps)
        call getlin
        ld a,(sprxps)
        ld e,a
        ld d,0
        add hl,de
        ld a,(sprlen)
        ld b,a
.deflpa:push bc
        ld de,(spradr)
        ld a,(sprwid)
        ld c,a
        ld b,0
        push hl
        push bc
        ldir
        ld hl,(spradr)
        pop de
        add hl,de
        ld (spradr),hl
        pop hl
        call nxtlin
        pop bc
        djnz deflpa
        ret
```

objects and moving them about, still using the in-built character set. This time, we're going to use the graphics cursor to locate the character, allowing us to move the object by one pixel as opposed to one character square:

```
BAHP 10·MODE·1
BAIN 20·x=100
BAKN 30·y=100
CAIP 40·MOVE·x,y
BABG 50·TAG
EAHF 60·PRINT·CHR$(250);
CABB 70·x=x+2
CAEB 80·y=y+2
EAGN 90·IF·x=300·THEN·END
CAOG 100·GOTO·40
```



The major command coming into play here is TAG; this puts the text cursor at the graphics cursor, so that we can move the text cursor by a pixel or two whenever we want to. As you can see, the results aren't exactly brilliant, with three ugly white lines following the bloke. Why is this happening? Well, let's take a look at character 250, the bloke, in close-up.

If you take a look at the bloke's direction in the program, you'll see he's travelling up and to the right. This means that when the bloke is re-drawn in his new position, the bottom and left hand lines of the previous picture are left on the screen, showing ugly unwanted pixels that form a line in his trail. This could be solved by defining a character with blank lines on the bottom and left-hand edges – there would be no pixels left on screen that wouldn't be over-written with the new character's blank edges.



Well, what do you know? It's our old friend CHR$(250).

2 It's just a simple character, and it probably wouldn't impress the spider on the wall behind you (hah – fooled you). It's monochrome, badly drawn, small and, frankly, about as impressive as a Conservative Party Political Broadcast.

This problem is, admittedly, a bit more of a hassle to deal with – the answer lies in working full sprites, a technique explained later on in this feature. I think it'd probably just be worth saying at this point that it's going to involve machine code, so prepare yourself. The program listed later will, however, give you the answer to your problems, so don't give up just yet.

Frame flyback

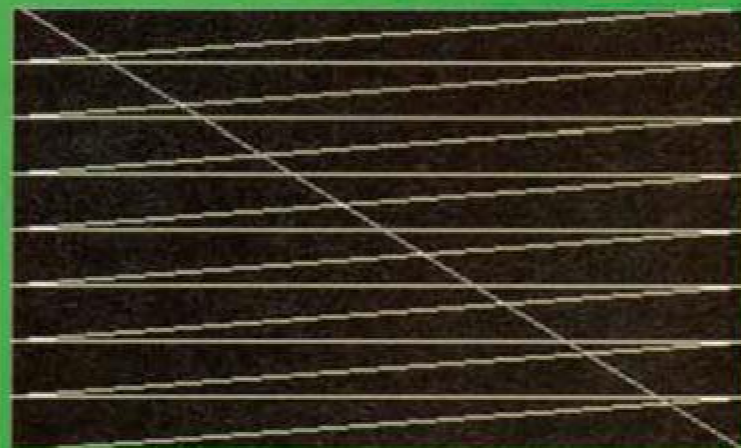
So what's this frame flyback stuff I keep mentioning in this feature all about then? Actually, it's quite simple – when you look at your monitor, all you're seeing are some chemicals being illuminated by an electron beam which makes them react and glow. Even though it seems as if every bit of the screen is illuminated at once, this isn't exactly true – a quick squizz at the diagram will show you that the beam starts at the top-left of the screen and scans a line at a time until it reaches the bottom of the screen when it shoots back up to the top again. If you're wondering why you can't see this, it's because the beam covers the whole screen every 50th of a second, which is flippin' fast.

If you're wondering how all this affects you, it's quite simple; if the scan line passes over the bit of screen you're altering whilst you're altering it, you'll end up with half of the old image, and the rest of the new one. Instead, you'd be better to wait for the beam to shoot up to the top left of the screen, and make all your alterations then.

This, funnily enough, is perfectly possible with the FRAME command (in BASIC), because that's exactly what it does – it just sits there and waits for the next flyback.

Fear not, machine coders, as firmware also makes provisions for this, in the form of MC Wait Flyback, at &bd19. The call itself has no entry conditions, and corrupts nothing at all, so it's always wise to use it in animation.

Unfortunately, it also slows everything down, as every time it's used, it's waiting for a certain period of time for the beam to fly back (this can be anything up to a 50th of a second, which is a long time when you loop an animation several times).



Though you can only see a few horizontal scans here, there are several hundred in reality, all scrunched up.

An insult to my palette

Of course, there is another method of animation that's a lot simpler than all this – palette switching. To explore this, you need to understand how the CPC's ink system works. Let's start on mode 0 (the 16 colour mode).

Imagine you have 15 fountain pens and a piece of paper. You can fill these pens with any ink from a choice of 26 different colours. You can change the colour of the paper in the same way. If you were to define a pen as blue (ink number 2) and draw some stuff on the screen, then changing the pen to a red ink afterwards would make all the blue on the screen change to red. This means that you can have a maximum of 15 colours (16 if you include the paper, 17 if you include the border) on the screen at the same time.

Right, what you can do is this; set each of the pens to one colour, say black, and draw the

```
.sprdis:cp 5
        ret nz
        call parget
        ld a,(sprpys)
        call getlin
        ld a,(sprxps)
        ld e,a
        ld d,0
        add hl,de
        ld a,(sprlen)
        ld b,a
.dislpa:push bc
        ld de,(spradr)
        ld a,(sprwid)
        ld c,a
        ld b,0
        push hl
        push bc
        ex hl,de
        ldir
        ld hl,(spradr)
        pop de
        add hl,de
        ld (spradr),hl
        pop hl
        call nxtlin
        pop bc
        djnz dislpa
        ret

.spradr:dw &0000
.sprxps:db &00
.sprpys:db &00
.sprwid:db &00
.sprlen:db &00

        list
        end
```

And the BASIC version:

```
DAIE 10·addr=&9000
CAEE 20·READ·b$
HAIB 30·IF·b$="**"THEN·CALL·&9000:END
FAJO 40·POKE·addr,VAL("&"+b$)
EAEF 50·addr=addr+1
CASE 60·GOTO·20
FAJB 70·DATA·01,0E,90,21,0A,90
FALF 80·DATA·CD,D1,BC,C9,00,00
FAOB 90·DATA·00,00,16,90,C3,C6
FAFG 100·DATA·90,C3,FC,90,53,50
FAGE 110·DATA·52,44,45,C6,53,50
FAEG 120·DATA·52,44,49,D3,00,DD
FAJF 130·DATA·7E,00,37,3F,17,17
FALG 140·DATA·32,38,91,DD,7E,02
FANG 150·DATA·32,37,91,DD,7E,04
FAPC 160·DATA·32,36,91,DD,7E,06
FAPH 170·DATA·3D,32,35,91,DD,6E
FAOF 180·DATA·08,DD,66,09,22,33
FABH 190·DATA·91,C9,3D,6F,26,00
FAPE 200·DATA·29,11,50,90,19,5E
FAPC 210·DATA·23,56,EB,C9,00,C0
FABF 220·DATA·00,E0,50,C0,50,E0
FAOH 230·DATA·A0,C0,A0,E0,F0,C0
```

same shape with each pen in slightly different positions, then set the background to the same colour. Now you can illuminate each shape briefly in rapid succession by changing each of the pen colours and then resetting them to black one after another. This, you guessed it, will give the impression of movement (well if it didn't I'd hardly be mentioning it in this feature, would I?).

This method is called palette switching, because all you're doing is switching palettes (surprise, surprise) to animate something. Type in and run the following program:

```
BAGP 10·MODE·0
DAAL 20·FOR·p=1·TO·15
CAGM 30·x=p*8+100
BALM 40·y=100
CAJP 50·MOVE·x,y
DAPK 60·DRAWR·0,100,p
CAGF 70·NEXT·p
CAEN 80·CALL·&BB06
DAGL 90·FOR·p=0·TO·15
CAPH 100·INK·p,0
CABI 110·NEXT·p
CABM 120·BORDER·0
DACO 130·FOR·p=1·TO·15
CAAC 140·FRAME
DADD 150·INK·(p-1),0
CANL 160·INK·p,26
CAHI 170·NEXT·p
```



The ink lines, as they'd appear on the screen were they not blacked out completely.

```
FABM 180·FOR·p=14·TO·2·STEP·-1
CAFC 190·FRAME
DANC 200·INK·(p+1),0
CAJL 210·INK·p,26
CADI 220·NEXT·p
CACK 230·GOTO·130
```

The image we're drawing, when we make each pen visible, looks something like the picture that (Andy willing) is somewhere near this paragraph, though only one line is visible at any one time.



Changing objects

As we said earlier (can you remember that far back?), the second part of animation is changing the appearance or of an object, to make it look like it has changed its appearance or stance, like raising an arm or moving its legs. The principle here is simple – in almost every case of animation, the entire character (or sprite, as we progress) is replaced by a new one, in the new position. Try this out:

```
BAHP 10·MODE·1
CABC 20·READ·c
FAFJ 30·IF·c=0·THEN·RESTORE
DAKE 40·LOCATE·10,10
DAHO 50·PRIN`T·CHR$(c)
FAAN 60·FOR·d=1·TO·100:NEXT·d
CACE 70·GOTO·20
FAOA 80·DATA·248,251,249,250,0
```

Why is it I feel really stupid analysing programs of little dancing men? Never mind.

Co-ordination

One of the most difficult things you'll need to work out is co-ordinating your sprite's appearance changes with it's positional movement. For instance, if it's travelling quite rapidly, but its legs look like they're moving at a slow saunter you'll end up with an extremely odd-looking piece of animation.

The easiest way to sort all this out, then, is to work out how many pixels your sprite will move by, and bear this in mind with every animation frame you draw, making sure its legs (or whatever) move the correct speed for the distance the character is moving.

Just video?

Of course, you don't just have to animate video sequences – you could work completely cartoon-style, and animate a set of hand-drawn frames, to create, perhaps, a logo for your software. This could even be done as a set of smaller sprites (one bit at a time), as with the *Switchblade* logo – it's made up of a set of different shapes stored as sprites that fly on to the screen from all directions.



An animated Switchblade logo.



Anyway, what this program is doing (for all those who can't be bothered to work it out) is just drawing one bloke on the screen, then replacing him with another, standing in a slightly different position (he's moved his legs).

Things don't have to be this way, though – we can do something else with palette switching. Take a look at the picture just below.

Though it looks quite confusing to start with, it's really quite simple (I know I keep saying that, but if I say it often enough you might start believing me). Imagine that the inks for this were as follows:

1 – Red
2 – Blue
3 – Purple

Let's turn all the inks to white (mentally), and turn inks 3 and 2 to black. That's right – it forms the letter B (*what is this? Sesame Street – Dave*). If we were to turn ink 2 back to white and turn ink 1 to black, you'd end up with the letter A. This may seem odd, but it's not – all



A red light filter should help you see the red elements.

```
FAJG 240·DATA·F0,E0,40,C1,40,E1
FACH 250·DATA·90,C1,90,E1,E0,C1
FALG 260·DATA·E0,E1,30,C2,30,E2
FAEN 270·DATA·80,C2,80,E2,D0,C2
FANG 280·DATA·D0,E2,20,C3,20,E3
FACH 290·DATA·70,C3,70,E3,C0,C3
FAGG 300·DATA·C0,E3,10,C4,10,E4
FAPG 310·DATA·60,C4,60,E4,B0,C4
FAIG 320·DATA·B0,E4,00,C5,00,E5
FABN 330·DATA·50,C5,50,E5,A0,C5
FAGJ 340·DATA·A0,E5,F0,C5,F0,E5
FANG 350·DATA·40,C6,40,E6,90,C6
FABJ 360·DATA·90,E6,E0,C6,E0,E6
FAOG 370·DATA·30,C7,30,E7,80,C7
FAJE 380·DATA·80,E7,11,00,00,19
FAGG 390·DATA·D0,11,50,C0,19,C9
FACI 400·DATA·FE,05,C0,CD,23,90
FAHH 410·DATA·3A,36,91,CD,4A,90
FAEF 420·DATA·3A,35,91,5F,16,00
FADG 430·DATA·19,3A,38,91,47,C5
FAMH 440·DATA·ED,5B,33,91,3A,37
FALG 450·DATA·91,4F,06,00,E5,C5
FADI 460·DATA·ED,B0,2A,33,91,D1
FAMG 470·DATA·19,22,33,91,E1,CD
FAII 480·DATA·DC,90,C1,10,E2,C9
FALI 490·DATA·FE,05,C0,CD,23,90
FAHH 500·DATA·3A,36,91,CD,4A,90
FAEF 510·DATA·3A,35,91,5F,16,00
FADG 520·DATA·19,3A,38,91,47,C5
FAMH 530·DATA·ED,5B,33,91,3A,37
FALG 540·DATA·91,4F,06,00,E5,C5
FAFJ 550·DATA·EB,ED,B0,2A,33,91
FAKF 560·DATA·D1,19,22,33,91,E1
FACJ 570·DATA·CD,BC,90,C1,10,E1
FAPC 580·DATA·C5,00,00,00,00,00
CAME 590·DATA·**
```

What you do with it now you've typed it

First of all, bear in mind that all measurements are in groups of four standard mode 1 pixels (though you can use it in any mode, the size is still the same). This means the screen has 80 columns, and 50 rows. The width and length of your sprite is also measured in these units. The measurements go from 1 to 80 and 1 to 50, as opposed to 0 to 79 and 0 to 49.

With each command, you will have to specify the area of memory to save your sprite out to. After you've run the program, I reckon that typing in the following line is a pretty good idea:

```
MEMORY·&3FFF
```

Start your sprites at &4000, and work upwards, stopping at &9000. You can work out how much memory a sprite will take by simply multiplying the width and height together, and multiplying that by four.

To define a sprite:

```
|SPRDEF,addr,xpos,ypos,wdth,lngt
```

And to display a sprite:

```
|SPRDIS,addr,xpos,ypos,wdth,lngt
```

And from there on you're on your own. But that's when the real fun begins.

we're doing is storing two monochrome images in different pen colours on the same area, colouring the squares on which they overlap in a third pen. This is another method of animation, and though it's a darned sight easier to just reprint the character, flashing inks remain quite happily changing even when the user is back in BASIC.

Picture animation

If you take a look at some of the more advanced console machines, you'll find some truly amazing games. One of the things that makes them so impressive is the console's ability to run short animation sequences. Of course, this is nothing new – just find *Dragon's Lair* in the arcades to see what your machine is truly capable of. One of the more recent impressive releases, however, has been *Flashback*, a *Prince Of Persia*-style romp with a gun and a lot more of an adventuring element.

Of course, the hardware that runs these sequences is based on incredibly advanced, specialised graphics handling chips, which push the technology quite a way beyond the reaches of your humble CPC. Do not despair, though – we can still come close in many ways. Let's take a look at *Switchblade*, available on tape, disk or cartridge. The game itself is a standard platform romp (though a darned good one), but it also has a rather nice little scene-setting intro sequence, giving an extra dimension to the game. Though the whole thing isn't exactly real-time video, it's still impressive in a 'what a nice touch' as opposed to a 'how the hell are they doing that?' kind of way (which, it seems to me, is the whole point of extra effects – to improve enjoyment, not just build a programmer's reputation).

Let's take a look at a typical boxed animation:



There are actually another three frames of animation between these two stills.

As you can see, it's far from technically impressive, but it's a nice touch. As for how it works, well that's simple, really – it's just a series of sprites, animated in the same way as the sprites we've been talking about so far.

You can do the same thing with slightly larger pictures, though – at the top of the next column is a frame from a simple animated story I produced with the aid of a digitiser and a 128K machine. The reason for the 128K was because each frame took up 4K of space, and I could store 16 frames in the extra banks, and another 10 in normal memory, making 24 frames altogether, running at four frames a second. This gave quite a decent 12 seconds of rough animation which, though it was in no way as smooth or fluent as the kind of image you could produce on a more advanced machine, looked pretty good when running (see above).



A still frame from a CPC video animation – the pixels are huge, but you can quite clearly see it's ex-AA art ed, Nick.

The only real problem you'll come across (apart from where the hell to find a digitiser), is using the correct mode. As you can see, the maths for the piece of animation I produced seemed a little out. The reason was because I made use of the ink-switching technique I described earlier, effectively doubling the amount of frames I could store, whilst letting me display monochrome images in mode 1.

"Hold on a minute," you might say, "why didn't you just store two mode 1 monochrome images in the same space by compressing them?" Well, compression takes time. It's also quicker to switch inks that write another image to the screen, so if the animation needed to run faster I could save a bit of time.

The digitiser, incidentally, was made by Rombo, and though we couldn't find the company any more, keeping an eye on Small Ads is a good idea. I'll probably print the animation listing in Type-Ins in a future issue if enough people write in requesting it (hint).

One bit at a time

Of course, there are no hard and fast rules when it comes to animation, and there's absolutely nothing to say you have to animate anything more than a small part of the screen, or a small part of the sprite. The easy way to do this would just be to create a sprite out of several smaller sprites. So let's pull out the trusty stock footage of *Prehistorik 2* (see below) and take a look at the gorilla.

Though it isn't immediately apparent by looking at a still of the game, the head, body, legs and arms are all constructed from separate sprites, giving him a much more fluid movement, so that he can produce a much wider range of movements whilst taking up a lot less memory; for example, the appearance of breathing is achieved by adjusting the only torso by one pixel every few frames, which takes up a lot less memory than replacing the entire character each time.



The gorilla in Prehistorik is actually built up from several different sprites.

Adieu

And with that it's farewell – I hope you've learnt enough to think about getting animated with your CPC at some point in the future. Failing that, you might be getting ready to produce some games that might now have a few more refined graphical touches. If you want to show your work off, send it along to Type-Ins, and you might even see it in print. Have fun.

OCP Art Studio

If you want to experiment with palette switching, we'd strongly advise you to take a close look at the facilities of *OCP Art Studio*. The reason, you see, is that it supports some very complex palette switching operations, allowing you to define several colour sequences for every ink on the screen. Below, is an example of the kind of stuff you could knock out with the package. The only major problem is that once you take the screen outside the environment of the program, you'd have to write a program to cycle these colours independently, but that really shouldn't be too much of a problem once you've had the chance to test your work inside the package.



The OCP Art Studio's palette screen – the slide controls represent the ink cycles.



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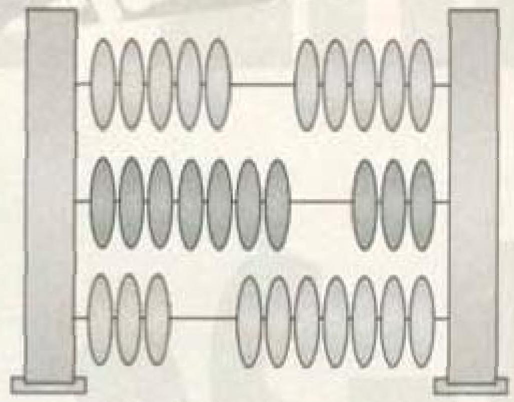
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AA/MAG/0294

Basically BASIC



You asked for it, and now you've got it – the complete beginners' guide to BASIC. If you've never typed in anything more complicated than RUN" but you think it's about time you did this is the series for you. Clur Hodgson goes back to the... no, forget I was going to say that...

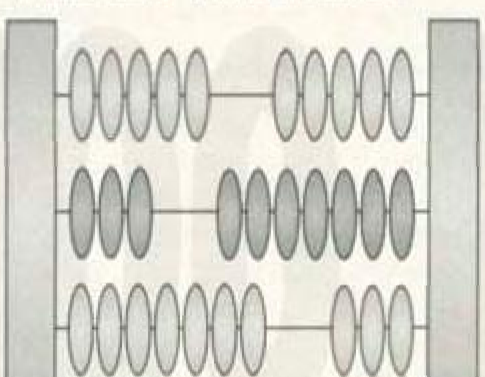


You can own all the books about BASIC in the world and be able to quote them off pat and still not understand the fundamentals of programming (in fact, most of them seem to be specifically written to prevent you from understanding). The best way to learn something new is to just go ahead and do it. So starting this month is *AA*'s revolutionary, hands-on approach to teaching the principles behind programming in Locomotive BASIC.

Every month I'm going to show you a simple type-in program and then take you step-by-step through the program explaining what's going on in each line. This month's program, for example, will ask for the user's name and, through a series of simple questions, work out whether to call them Mr, Mrs or Miss. Not very exciting I know (and perhaps a tad sexist) but stick with me and you'll be writing simple games before you know it. Anyway, here we go:

```
10 REM Learning basic 1
20 CLS
30 PRINT"What is your surname, friend";:
INPUT name$
40 PRINT"Are you a boy or a girl (please
 input B or G)";:input a$
50 IF UPPER$(a$)= "G" THEN PRINT"Are you
 married (please input Y or N)";:INPUT a
$
60 CLS
70 hello$="Hello "
80 IF UPPER$(a$)="B"THEN a$:="Mr "
90 IF UPPER$(a$)="Y"THEN a$:="Mrs "
100 IF UPPER$(a$)="N"THEN a$:="Miss "
110 PRINT hello$;a$;name$
```

BASIC is simply a language your computer can understand – just as a Lebanese farmer probably wouldn't understand you telling him how to plough a field in Welsh, your Amstrad can't understand proper English. You need to tell it what to do in some other way. Arnold would understand each of the instructions above if you typed them in separately (try typing CLS and see what he does), but a much better way to do it is to give him all the instructions at once in the form of a program which you can store and go back to at any time.



But there are certain protocols that you must follow in order to get your Amstrad to do what you tell it. One of the most important is to remember never to hit return until you've finished typing in a whole line, even if it reaches the edge of the screen and has to break and begin again on the next line – a return would confuse Arnold no end and your program wouldn't work.

Designer labelling



The first thing you'll notice about the program is that every line in it begins with a number followed by a space; this is just a way of telling Arnold in which order to deal with the instructions. The conventional numbering system is 10, 20, 30... etc, for the simple reason that it gives you room to insert new lines between existing lines if you happen to have forgotten something important, or you want to alter your program in some way later on. Anyway, on with the analysis.

```
10 REM Learning basic 1
```

The first line (line 10) is a REM statement. There is absolutely no point at all for this being here, Arnold will ignore anything you write after the word REM. They are useful, though, for marking sections of longer programs so that you can easily see what Arnold was thinking about when your program goes wrong.

```
20 CLS
```

The command CLS on line 20 tells the CPC to wipe the screen clean and put the cursor in the top left hand corner.

```
30 PRINT"What is your surname, friend";:
INPUT name$
```

Now we get to the first line of the program proper. Typing PRINT instructs the computer to print whatever follows that command on screen. Any characters that you want to be printed on-screen need to be surrounded in speech marks. Not only does this tell the computer that this is the bit you want it to write, but it knows that whatever text is between two speech marks *is not an instruction to follow*.

After the second set of speech marks closes the sentence, "What is your name, friend?" you'll see a semi colon (;). This is the instruction that tells your CPC that the next thing to be printed is to come up on screen straight after the sentence it's just written. The next thing to be printed will be a question mark because you've told him to

Other BASIC instructions

? – Instead of typing PRINT as an instruction you can just type ? (the CPC will automatically convert a ? command to a PRINT command).

LIST – At the ready prompt if you type in LIST the program will be listed out in order of the line numbers

EDIT – If you've typed in, say line 40 incorrectly, to edit the line type EDIT 40 and hit return. Then move the cursor (with the arrow keys) to the bit you want to change, alter it and hit return when you've finished. Line 40 will automatically be replaced by the new line.

AUTO – If you're not very good with numbers then type AUTO before you start typing in the program and the next line number will automatically appear on the next line when you hit return to finish the line you're on.

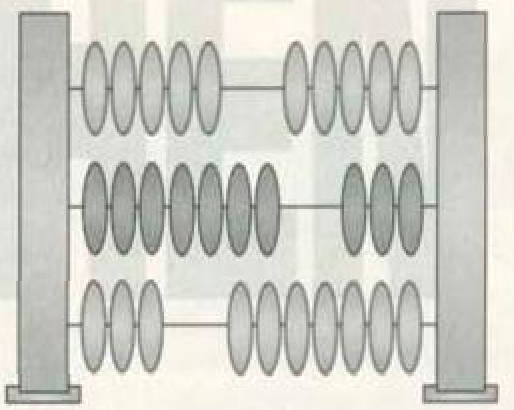
SAVE – To save your program, simply type SAVE"name of program" at the ready prompt.

LOAD – To load a saved program, all you do is type LOAD"name of program" at the ready prompt.

RUN – This command tells your CPC to obey the instructions in your program starting with the first line and working through them in order.

BASIC rules of punctuation

QUOTATION MARKS ("–") – When a set of characters is surrounded by quotation marks the computer treats those characters as if they were a single variable and takes no notice of what actually is written inside.
SEMI COLONS (;) – These instruct the CPC to print what's coming next immediately after what came before, instead of inserting a carriage return between them (try it out).
COLONS (:) – A colon separates commands when they appear in the same line. Arnold acts upon the line as if the colon was a return.
SPACES – It's of vital importance to separate the line number from the program line with a space.



expect an input from you. The colon (:) tells the CPC that a new instruction is coming up, which is is not part of the print command, it's a brand new command.

That command is INPUT name$. The INPUT part tells the computer to expect a command to be typed in, and the name$ bit assigns a name to the set of characters that will be typed in. When Arnold gets to this bit of the program he'll tell you to input something by printing a question mark on the screen.

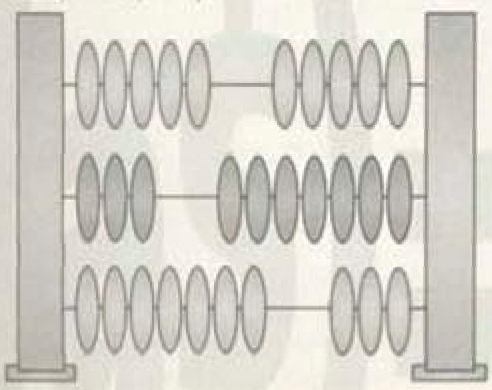
Also, remember what I said about line breaks? On screen the colon (:) in the line above should be the last character you can fit on the line, but don't type a return – just carry on typing the line.

```
40 PRINT"Are you a boy or a girl (please
 input B or G)";:input a$
```

Right, so far we've cleared the screen and asked the user what their surname is. The set of characters that make up their name is being stored under the name name$ in a section of the computer's memory. Next we want to know if we're dealing with a girl or a boy. So we ask the user in line 40 and assign the answer (Y or N) to the string a$, stored in an adjacent section of the computer's memory to the set of characters name$.

```
50 IF UPPER$(a$)= "G" THEN PRINT"Are you
 married (please input Y or N)";:INPUT a
$
```

Now, if the user's a lass we could call her a Ms, but I detest that attitude (and anyway, I want to introduce another variable into the program). So if you don't want to agitate the females in your life you ought to ask them whether or not they are married to determine their status, and that's what line 50's about. Line 50 is the first in our program to use an IF/THEN command – IF one thing is true THEN do the second thing. In this case if the user is a female (has entered G in response to the input a$ prompt in line 40) then she



will be asked, "are you married?" Her response to this question will be put in memory as a$ replacing the G that was there before. The UPPER$(a$) bit instructs Arnold to port the characters assigned to a$ into upper case (capitals).

```
60 CLS
```

Now we have all the information we need to print the final message, so we clear the screen on line 60.

```
70 hello$="Hello "
80 IF UPPER$(a$)="B"THEN a$="Mr "
90 IF UPPER$(a$)="Y"THEN a$="Mrs "
100 IF UPPER$(a$)="N"THEN a$="Miss "
```

As you can see on line 70 not only can you assign strings to inputted data but you can also assign them within a program (hello$="Hello "). a$ is now defined as one of three characters: B, Y or N. Lines 80 to 100 replace the characters defined as a$ with the appropriate Mr, Mrs or Miss.

```
110 PRINT hello$;a$;name$
```

Finally line 110 PRINTs out the greeting message. You'll notice that the message is not stored in the computer as words in quotes but is printed from a combination of the three strings that we have defined in the rest of the program. However you could just use the instruction "Hello ";a$;name$ and because of the way strings work the last line could also read:

```
110 z$=hello$+a$+name$:print Z$.
```

Number crunching

So, we've dealt with handling alphabetic characters – inputting them, manipulating them and throwing them back out again – but what about numbers, how do you deal with those blighters? Believe me, it's a cinch. And to prove it, here are a few lines that could be tacked on to the end of the previous program:

```
120 PRINT"In what year were you born ";
a$;name$;:INPUT year
130 CLS
140 age=1994-year
150 IF age<=16 THEN PRINT"Shouldn't you
be at school?"
160 IF age>16 AND age<=65 THEN PRINT"Sho
uldn't you be at school?"
170 IF age>65 THEN PRINT"How's the gold
watch?"
120 PRINT"In what year were you born ";
a$;name$;:INPUT year
```

Line 120 is pretty straightforward, putting the user's name at the end of the question adds a nice personal touch don't you think? The main difference between this line and, say, line 40 is the INPUT command. Note that when you're dealing with a numeric string you do not use the $ symbol after the name of the string itself. This tells Arnold to expect a set of numbers rather than letters.

```
130 CLS
140 age=1994-year
```

After clearing the screen on line 130, line 140 does a calculation with the string YEAR. Numerical calculations work the same way in BASIC as they do in normal maths, using the same four basic symbols for addition (+), subtraction (-), multiplication (*) and division (/). Here we take away the year the user was born from 1994 to arrive at the string age.

```
150 IF age<=16 THEN PRINT"Shouldn't you
be at school?"
160 IF age>16 AND age<=65 THEN PRINT"Sho
uldn't you be at school?"
170 IF age>65 THEN PRINT"How's the gold
watch?"
```

Lines 150 to 170 then use the string AGE to determine whether the user is a school child, of working age or past retirement age and then PRINT a statement in response. Line 150 asks whether the user is aged less than or equal to (<=) 16 and if this is true then will PRINT "Shouldn't you be at school?"

Line 160 then goes on to ascertain whether the person using the program is of working age by asking if the age is more than 16 and less than or equal to 65. If the age is between the two points then Arnold will print the appropriate response. Similarly the next line asks if the user is of retirement age (okay it would be different for women, but this is an example program not a social satire).

Coming soon

That's all for this month folks, but tune in next month for the second exciting installment of the series in which we draw... well I haven't quite decided yet what the drawing's going to be, probably a house or something like that. Anyway we're going to draw something really brilliant and colour it in. Be seeing you.

Assembly Line

If you can't stand the heat, turn the radiators off. Simon's about to get going with yet another installment of everybody's favourite AA Machine Code tutorial.

Last month, we covered bitwise byte operations. Well, a few of them. This month, we're looking at shifting bytes. Let's start with a byte, then.

```
&4e   &x01001110
```

Imagine if we took the eight bits of this byte, and shifted them all one to the left:

```
&9c   &x10011100
```

As you can see, each bit in the byte has shifted one to the left, effectively doubling the number. This would be straightforward, were it not for the next cunningly placed example:

```
&80   &x10000000
&00   &x00000000
```

This time around, rather tragically, the far left bit is lost, effectively trashing the number completely. You must remember, then, that this doubling method only works with numbers less than 128. Let's take a look at the Assembly language for that:

```
ld a,&4e
sla
```

What could be simpler? Let's try and times a number by five, then:

```
ld b,a
sla
sla
add b
```

Divided we fall

Wow – real maths n'everything! Let's see what we can do to divide a number. Well, we'll start with our &4e:

```
&4e   &x01001110
```

And if we were to half &4e (78), we'd end up with &27 (39), which looks like this:

```
&27   &x00100111
```

Can you see what's happened? The bits of the byte have slid to the right – the same effect which can be achieved with the sra command. So let's look at that in Assembly:

```
ld a,&4e
sra
```

On a sad note (sniff), unlike multiplication, we can't use the shifting method to divide by numbers other than 2, 4, 8, 16, etc, as they're the only denominators provided by the binary number system.

It just dropped off!

In effect, it did – I'm talking about the bit that falls off the end of every shift instruction. Whether it's a set bit (1) or not (0), you might still want to know what it was. You could just make sure you always check it before any shifting goes on, but that's not really as much use as being able to catch it as it drops off:

```
ld a,&4e
src
jp nc,label
```

So as opposed to sra, we're using src, which is the same operation but the carry is affected by the result, as it's set to the bit that drops off the end of the byte. It also has another use, being that the carry flag will also dictate the byte shunted on to the other end (the end at which we add a bit), allowing you to enter set bits as well as empty ones.

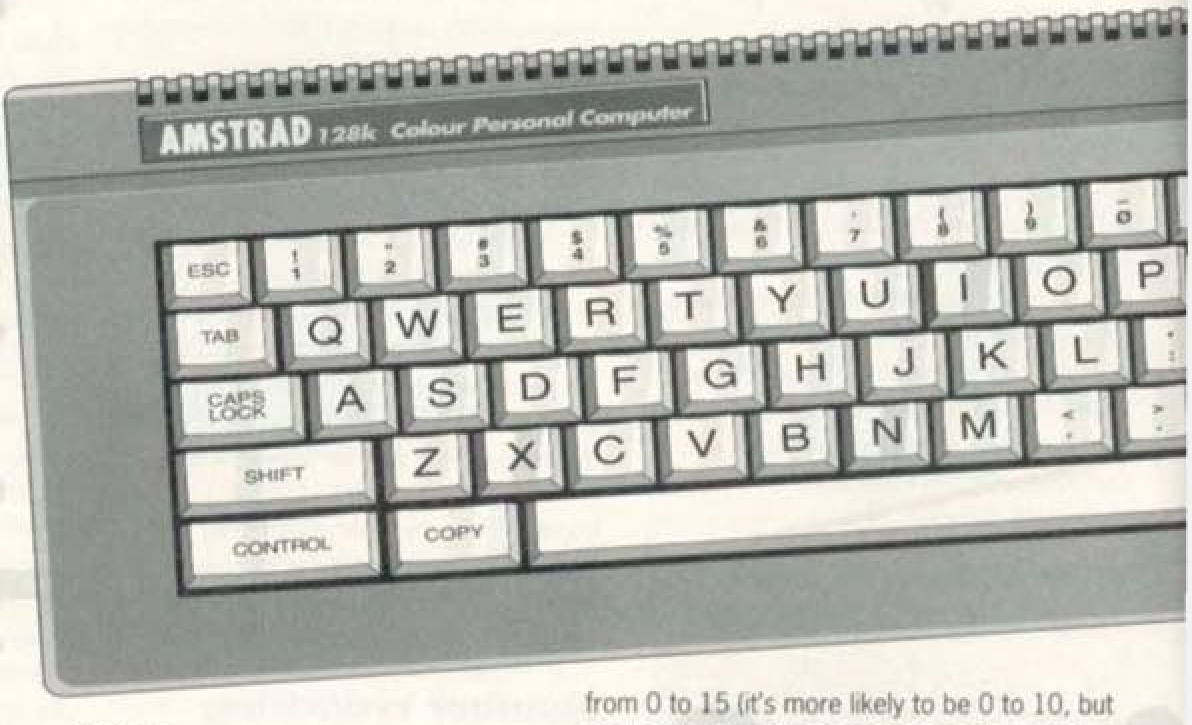
Definitions

As a sort of summary (*space filler, you mean – Dave*), here are the instructions in full:

SLA	Shift left accumulator
SRA	Shift right accumulator
SLC	Shift left with carry
SRC	Shift right with carry
RLA	Rotate left accumulator
RRA	Rotate right accumulator

And?

Okay, I'll admit that apart from multiplication and division, the uses of the shift commands aren't exactly immediately apparent. Let's imagine the following scenario, though; you're storing data, maybe for a game, maybe for a serious package, which consists of a series of numbers



from 0 to 15 (it's more likely to be 0 to 10, but we'll still call it 15 because it's one below 16, which is a nice round number in hex).

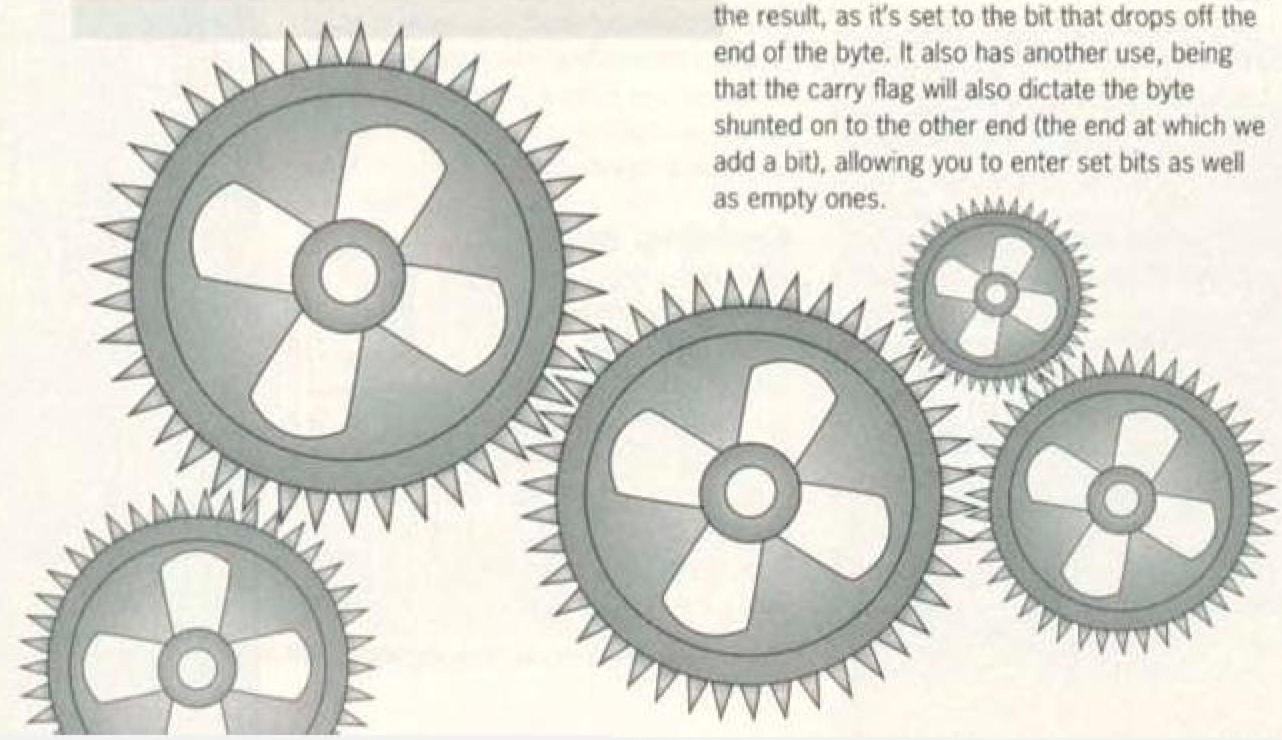
If we were storing 1,024 of those numbers, we'd normally need 1,024 bytes. However, as 15 is only a four-byte number (seeing the relevance yet?), we can store two numbers per byte, therefore using only 512 bytes of memory. Though the numbers won't be accessible in the storage form, here's how we'd do it:

Stored bits	3 2 1 0 3 2 1 0
Real bits	7 6 5 4 3 2 1 0

And the Assembly code to do this, where b and c are the numbers to be stored, would look something like this:

```
ld a,b
sla
sla
sla
sla
add c
```

Though this isn't the kind of situation that'd make you think, "That's just so handy," you might still find the technique useful some day,



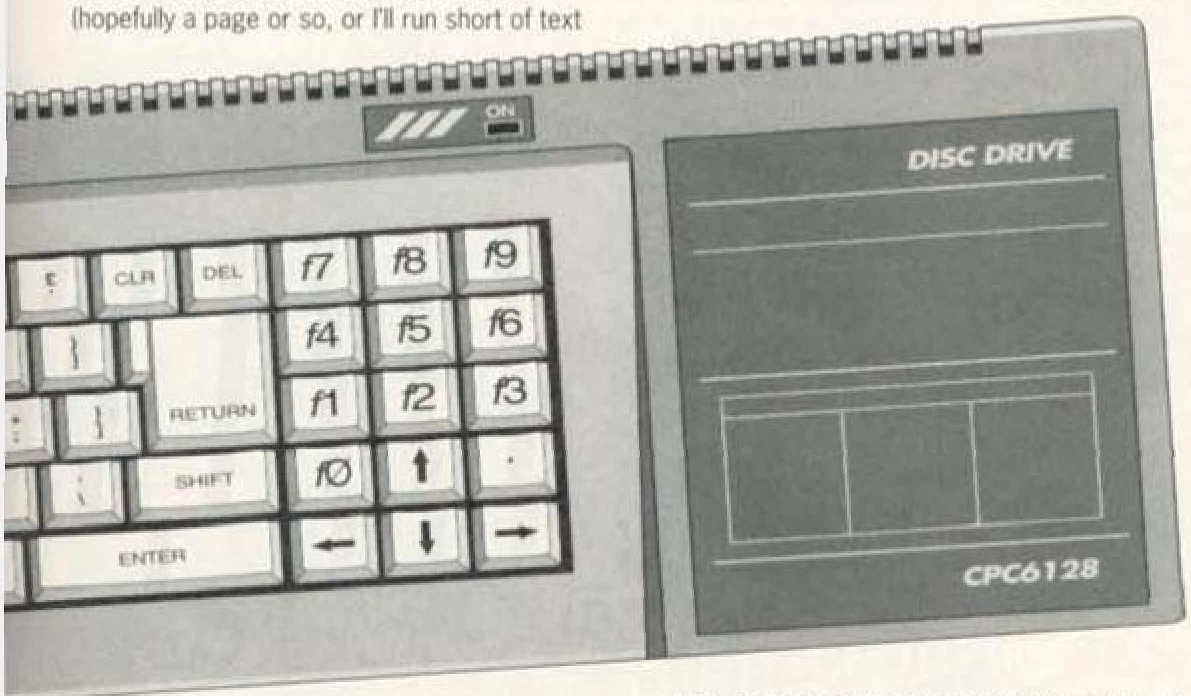
and it does illustrate the uses of shifting quite well. Another thing just occurred to me – when I said that the information is not accessible in its stored form, I meant you'd have to decode it first, but you can still get at it again (where d is the encoded number, and b and c are the original figures):

```
ld a,d
and &0f
ld c,a
ld a,d
sra
sra
sra
sra
and &0f
ld b,a
```

And your code is restored in all its former beauty. If you're at all perplexed about the and instructions, don't be – we covered it all last ish, and it's just your fault for not having that mag in your collection, so turn to Back Issues now (*nice plug, Simon – Dave*).

Spin on it

So we've spent quite a decent bit of time (hopefully a page or so, or I'll run short of text



and Dave'll kill me) shifting registers around, I've been concentrating on my 'F' key intensely and my writing career has hung in the balance, but all this can change as we take a look at a slight mutation of shifting – rotation.

If you've got the hang of shifting numbers, rotation won't be too much of a problem to understand. Let's rotate a number to the left and see what we get:

	&4e	&x01001110
1st	&9c	&x10011100
2nd	&39	&x00111001

What could be easier? As you can quite clearly see (don't argue), the bits of the byte are just, well, rotating, really. To be quite honest I can't really see the point of taking this explanation a whole lot further, as the principle isn't all that difficult to master.

Encoding

Remember last month's bits and pieces on being able to use XOR to encode whole chunks of data? We did come up with quite an easy way to break the code (well, I did), but this month's material gives us a slightly more reliable method of encryption.

This time, we're going to take a set of bytes, and encode them by rotating them a bit. You see, whereas with last month's method it'd be really easy to check up on what 0 would look like if you came across a string of &39s (you'd know that was the key) with rotation, when the cracker came across a string of &39s and assumed them to be zeros when decoded, they'd be wrong – they were a string of &4es rotated.

For double protection you could always XOR your code after rotating it, or XOR it once, rotate it, XOR it, then rotate it again – the more you encode this way, the harder the protection is to crack (as opposed to the XOR-only encryption, which gets no more difficult to crack however many times you encode it).

What's left?

What you've learnt here over the past few months is pretty much all you need to know – the rest is just in the realms of theory and using the instructions to execute the maths to do whatever you want to do – there really isn't much left on the new instructions side of things.

Of course, that doesn't mean we won't be carrying on with this series, but from now on we're going to deal mainly with programming theory, leaving the actual coding in the background (we'll still be printing listings, but the emphasis will be on what they're doing and why they're doing it as opposed to how).

Next month, we'll be taking a slightly more in-depth look at the way the CPC's internal memory is laid out, and how we can use the various system variables and firmware features to our advantage. We'll also be covering a few more incidental features (such as bank switching, disk operations, etc) as this is all simple stuff you haven't seen yet but will probably need to know at some point. Have fun.

Interactive access to AA

You've probably heard of the huge advances made with the 3DO, Amiga CD32 (well, not that big an advancement, huh), and the like, but as always on *AA*, we're going to take it a bit further, and bring interactive learning into the home for the masses at only £2.95 a shot. That's right – this is the world's first interactive piece of paper.

The way it works is simple. Inside this page is a microscopically thin and incredibly floppy circuit board containing a complete computer system programmed to bring you the best in interactive Machine Code tutoring. In fact, all you have to do is build the console:

The first thing you'll need is a bit of paper, on which you write your name, address, and outline the aspect of Machine Code you're stuck on. Next, you'll need a storage case, preferably an Envelope™ (they paid us huge amounts of cash to endorse their product). On the front of the storage device, simply write Interactive Code, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon, BA1 2BW, and place the whole affair in one of the big red cylindrical communications devices we've had especially set up all over the country, first putting a stamp on it (for the storage device to use as combustible fuel).

Shortly after this (about a month), your solution should appear on the *Amstrad Action* interactive Assembly Line pages – at the forefront of technology.

More, more and even more

It's also worth emphasising that there are yet more contexts for shifting and rotating, to do with their various uses on either the accumulator directly or other registers as a whole (there are two types of command, these being accumulator or register).

All this means that when you're looking through your various books full of opcodes, hidden or otherwise, you'll come across quite a few more shifting and rotating commands. But worry ye not, because if you take a look at the box of definitions, you should be able to work out what any new ones do just by swapping letters.

Next month

Billy turned around slowly – Johnny had found the pistol in the dark, and was taking the opportunity to take aim while the lights came back on. From the corner of his eye, Billy could see the light switch, and cursed the fact he didn't have four feet arms for the third time in his life.

"Say goodbye to all of... this," muttered Johnny as his finger closed around the trigger.

It's sort of hard to say what happened next, as all Billy could see was a mess of plaster and a flurry of black. All Johnny could see was a flurry of plaster and lots of black. Permanently.

"Sorry about the ceiling, I just had to tell you that Assembly Line will be back again next month" muttered the tall hairy blob.

"I already knew"

"Oh. Sorry."

"Where was I?" but before Billy could complete the sentence, his head exploded in a mess of shattered bone.

"I hate to leave a job half done"

Back issues

All these Amstrad Actions are still available with the covertapes!



AA66: Features: Complete guide to games-playing, simulators. Reviews: *Supercars, Robocop 2, North and South, Strider 2, Mystical, Golden Axe, Narco Police.*

AA75: *Cisco Heat* (demo), *Impossaball, Tir Na Nog.* Inside: Buyers' guide to peripherals., *Smash TV, Turtles Coin-Op.*

AA76: Covertape: *Graphic Adventure Creator, PageMaker Plus, Southern Belle, Extended BASIC* for 464 owners. Inside: 1991 reviewed, Peripherals part 2, *Dizzy's Excellent Adventures, The Simpsons, Super Space Invaders, OutRun Europa, Cisco Heat, Pitfighter.*

AA77: Covertape: *Seymour Take One* (mini game), *Firelord, Football Forecaster,* Fonts. Inside: The French Connection, *GAC* tutorial. Reviews: *You're Learning* (educational pack), *Paperboy 2.*

AA78: Covertape: Space Crusade (demo), *The Sphinx Jinx, Shockway Rider.* Inside: Guide to PD. Reviews: Space Crusade, *Double Dragon 3.*

AA79: Covertape: *Ranarama, Maze Mania, Meaning Business* (suite of business utilities). Inside: Behind the scenes at AA. Reviews: *Blues Brothers, Rodland, Prehistorik.*

AA80: Covertape: *Stryker and the Crypts of Trogan* (demo), *Anarchy, Croco Magneto, GPaint.* Inside: How a game is made (Seymour), buyers' guide to word processors. Reviews: *Titus The Fox, Stryker.*

AA81: Covertape: *Forbidden Planet, The Addams Family* (demo), *Sprite Designer.* Inside: Fanzines, buyers' guide to DTP.

AA82: Covertape: *Lemmings* (demo), Dragontorc, *PowerPage.* Inside: Making money from programming, buyers' guide to art packages. Reviews: *Lemmings, The Addams Family.*

AA83: Covertape: *Defenders of the Earth* (demo), *Drahdrisa, Supersonic* (music). Inside: What France has got to offer CPCers, buyers' guide to educational software. Reviews: *Turbo the Tortoise, Grell and Fella.*

AA84: *Famous Five on a Treasure Island, Notepad, Liteprog.* Inside: 3D games. Reviews: *Hideous, Brunword ROM.*

AA85: Covertape: *On The Run, Link, Worktop, Disk Organiser.* Inside: Making music. Reviews: *American Tag Team Wrestling, Soccer Pinball.*

AA86: Covertape: *Glider Rider,* animation utilities. Inside: Making money with your CPC, MIDI music. Reviews: *Wild West Seymour, Reckless Rufus.*

AA87: Covertape: *Nexor, Pakman, MPack, Pilot* (very simple programming language). Inside: Dizzy, this is your life. Reviews: *Football Manager 3, Super Seymour.*

AA88: Covertape: *Tankbusters, Penguins, JL-Copy* (tape to disk utility). Inside: *Videomaster,* top CPC add-ons. Reviews: *The Shoe People, Crystal Kingdom Dizzy, Robin Hood.*

AA89: Covertape: *Wriggler, MagicDOS, Superchars.* Inside: The European demo scene. Reviews: *Zap'T'Balls, Crazy Cars 3.*

AA90: Covertape: *Steve Davis Snooker, LARA* (Machine Code Utility). Inside: 100s of Multiface POKEs. Reviews: *Nigel Mansell's World Championship, Popeye Collection.*

AA91: Covertape: *Tasword, Colossus Chess.* Inside: The future of the CPC, WP tips.

AA92: Covertape: *BooTracker* (music program), *Syntax, Balloon Buster.* Inside: Complete guide to data storage. Reviews: *Soundtrakker, The Simpsons.*

AA93: Covertape: *Racing Boxform, Mystical, Who's Afraid Of The Balrog?* Inside: Spreadsheets and databases, UAUG interview, setting up a PD library. Review: *Super Cauldron.*

AA94: Covertape: *Instant Recall* (database), *Contraption.* Inside: The best of everything – the AA awards ceremony. Reviews: *MicroDesign 2, Disc Archiver, Prehistorik 2.*

AA95: Covertape: *MasterCalc* (spreadsheet), *Biff.* Inside: *Street Fighter 2* – the myth starts here. Reviews: *Pro-Ext, SmArt Plus, Trakers.*

AA96: Covertape: *Screen Designer, Neil Android.* Inside: ROM round-up, Campursoft interview. Reviews: *ZXM, Xexor,* Cart round-up.

AA97: Covertape: *Zzap Assembler, Rik The Roadie.* Inside: The best software for under £5, debugging. Reviews: *Ultimate Sprite Searcher, Forth, Galactic Warfare, Ball Bearing.*

AA98: Covertape: *The Blues Brothers.* Inside: 50 tips to make your computing life easier, Sentinel interview, Encyclopaedia Part 1. Reviews: *Disc Imager, Zack Game Creator.*

AA99: Covertape: *Stormlord, Font Editor, Grab Converter.* Inside: DTP round-up. Reviews: Homebrew software, *ProPrint ROM, Stellar Outpost,* fanzines.

AA100: Covertape: *Elite.* Inside: The Top 100 CPC products ever, a look back at 100 issues of AA. Reviews: Touchdown, Page Publisher.





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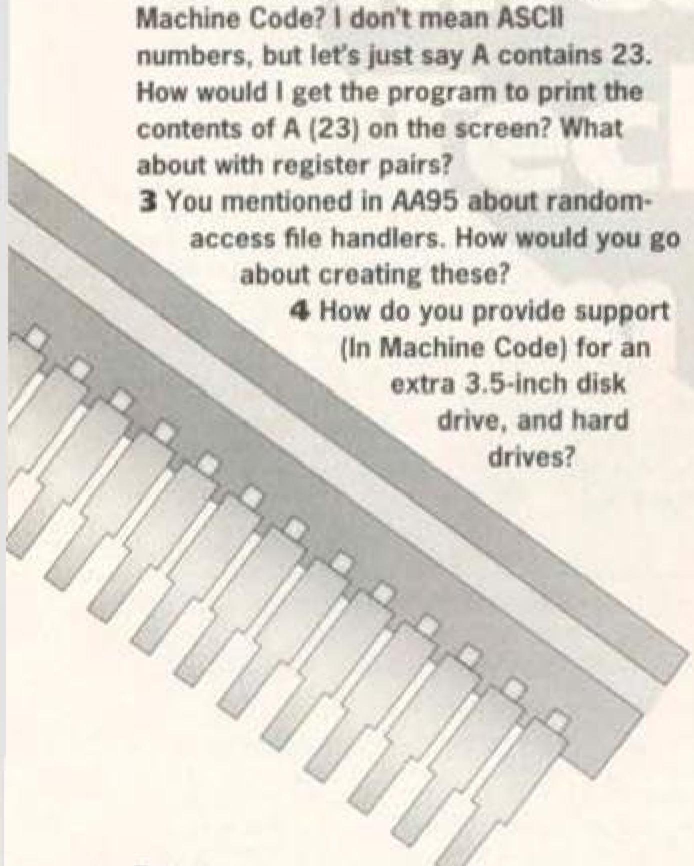
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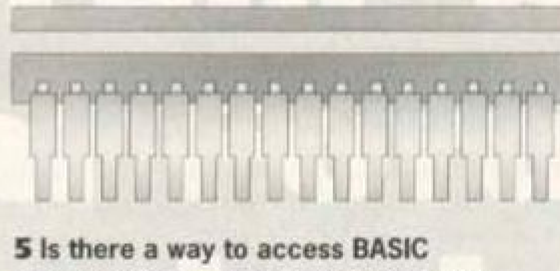
Technical Forum

Got a techy problem with your CPC? Write to Richard Fairhurst for assistance – his column keeps everyone happy. Everyone, that is, except Richard, who doesn't have anyone to write to when his programs don't work. It's a hard life.

The name is back

1 Would I need a ROM-box if I wanted Maxam 1.5 and *Protext* on ROM? How about with *HackIt* as well?
2 How would you print numbers from Machine Code? I don't mean ASCII numbers, but let's just say A contains 23. How would I get the program to print the contents of A (23) on the screen? What about with register pairs?
3 You mentioned in *AA*95 about random-access file handlers. How would you go about creating these?
4 How do you provide support (In Machine Code) for an extra 3.5-inch disk drive, and hard drives?





5 Is there a way to access BASIC commands from Machine Code (most importantly, INPUT)?
6 Can I still get the disk versions of covertapes as old as *AA*82?
7 Is there any way to make the screen 64K large on 128K machines, making use of the extra 64K banks for resolution of 640x200 in 16 colours?
8 Are there restrictions on the size of ROMs?
9 Do you think Paul Keating is a sack (options: Y, Y, Y, Y or Y)?
Kent Boogaart, South Australia

1 Yes to the first two. HackIt comes in its own unit, so it doesn't need a ROM-box. However, if you really wanted, you could take it out of there and put it in ROM slot 0 in a ROM-box.
2 No problem. Straight from Charley's Subroutines Store, here's a routine to print the contents of A on the screen as a 3-digit decimal:

```
.pr_a ld e,100: call prar
        ld e,10 : call prar
        ld e,1
.prar ld c,0
.pralp    sub e: jr c,prao
          inc c: jr pralp
.prao add e: push af
          ld a,c: add 48: call &BB5A
          pop af: ret
```

...and here's one to print HL in five digits:

```
.pr_hl    ld de,10000: call prhlr
          ld de,1000 : call prhlr
          ld de,100  : call prhlr
          ld de,10   : call prhlr
          ld de,1
.prhlr    xor a
.prhllp   sbc hl,de: jr c,prhlo
          inc a    : jr prhllp
.prhlo    add hl,de: add 48: jp &BB5A
```

3 With great difficulty. You'd have to write your own disk accessing routines which automatically moved to the appropriate track and sector on the disk to read a certain record, keep an index of where each record is, and so on. Not a job for the faint-hearted.



4 Extra disk drives are (relatively) easy. The CPC's disk system has built-in support for these, in the form of the 'DPB' (disk parameter block). This contains information about the format being used for each drive; it's a simple job to alter this to a (say) 400K format for 3.5-inch disks.

This much is simple, and it's how a really

Top Tips

Be in control

Having to stop halfway through a PRINT command to change PEN ink isn't always the most fun thing to do (*you do surprise me – Dave*), especially as Locomotive BASIC has a very annoying habit of printing text on the next line if it doesn't look like it will all fit on the current line. The answer is to hide a few 'control codes' in your text. For example, try CTRL-O followed by 2; this selects PEN 2. CTRL-N followed by 3 selects PAPER 3. CTRL-V followed by 1 switches transparent mode on (0 to turn it off again), and CTRL-X on its own simply reverses the current PEN and PAPER.

CTRL-G goes 'beep', CTRL-L clears the screen, and CTRL-D followed by 0, 1 or 2 sets the current MODE. Finally, if you're printing lots of spaces on an already blank screen, CTRL-I – or TAB – prints quicker than a normal space. This isn't the most advisable technique to ensure readable programs, but for compact coding, it's a useful trick to learn.

I'm free!

A quick tip for disk-owning coders. There are a few undocumented features of the CAS file input/output routines when used with AMSDOS; the first is that, if you are using CAS IN DIRECT or CAS OUT DIRECT (rather than working byte-by-byte), the 2K buffer you allocated when the file was opened won't be used. This means you can put it anywhere in memory and it won't matter.

If you're using the catalogue routine at &BC9B, note that the 2K buffer remains useful on return – so you can use the catalogue from it for different purposes (each 14-byte record includes the 11-byte filename, the two-byte file size, and an &FF to indicate that it's still catalogue data). Unlike its tape equivalents, this doesn't automatically close the input and output files. Last of all, the total amount of free space left on the disk is stored in DE on return.



The PG Tip of the Month (look, this was Simon's idea, okay?)

simple 3.5-inch disk operating system (like MS800) works – basically by poking a few bytes into memory (you too can charge £10 for a few lines of simple coding). The only disadvantage is that once you've poked these bytes into memory, the CPC will assume that all disks you want to read in that drive are the same format. A more accomplished piece of work, like *ROMDOS*, *ParaDOS* or *S-DOS*, will contain some impressive programming trickery to automatically recognise which format each disk is. *ROMDOS* and *ParaDOS* do it by completely replacing the disk ROM with a subtly modified version containing more format information; *S-DOS* uses a different technique to intercept the existing disk ROM.

The other part of supporting a 3.5-inch drive is writing a format routine, which can be based on the relevant *AMSDOS* call. The details of this and the DPB can be found in the *Firmware Guide* (SOFT 968) or the 464 disk system supplement (SOFT 158A), if you can find either. Alternatively, if you're really interested, ask us for the full gen on *AMSDOS*, and we'll give it a bit of space in Techy Forum one day.

5 Nope – well, not officially. There is actually a way to use the routine from the INPUT command, although it will only input strings, not numbers. (The conversion into a number when you use a command such as INPUT a% is done by another part of the BASIC ROM). The routine you need sits at &BD3A on the 464, &BD5B on the 664, and &BD5E on the 6128 and all Plus machines. Call it with HL pointing to the address of a 256-character buffer where your text is to sit; on return, A will contain 13 if ENTER was the last key pressed (and carry will be set), 252 if ESC was pressed (carry unset).

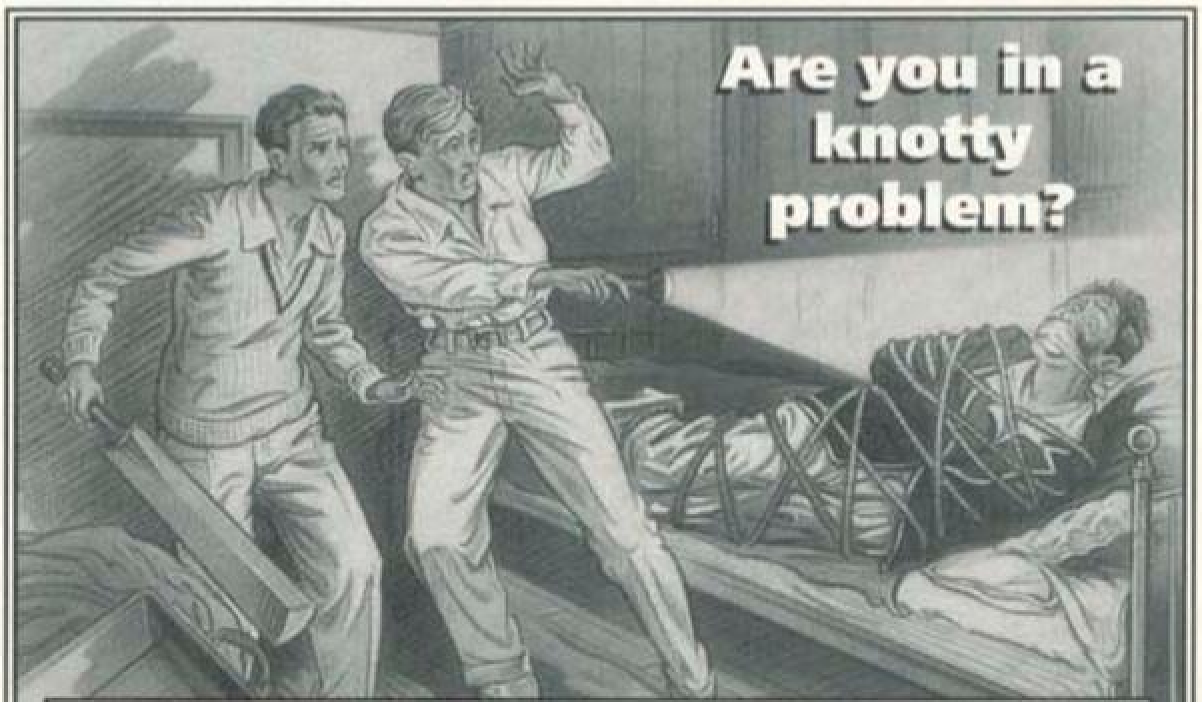
6 It's best to contact Ablex and ask first (the address is on page five).

7 Not possible. For a start, the CPC's memory is wired so that extra memory can never be used as screen memory of any sort. Besides which, there's no way to have colour set-ups beyond the standard MODE combinations, as they're hard-wired into the VGA – one of the CPC's two main display chips. Sorry.

8 Each ROM is limited to 16K; however, it is possible to link a program up to four ROMs at once. The theoretical maximum number of ROMs on a CPC is 252 (fewer on a Plus, as some of these slots are used for the cartridge), but if you can even find 50 CPC ROMs, I'd be surprised.

9 Well, I wouldn't put my potatoes in him.

Richard



Don't panic! If you've got any technical queries about the CPC then Richard Fairhurst is the man with all the answers. So don't get all tied up in knots – if your CPC is getting the better of you the only solution is to write to: Technical Forum, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. You know it makes sense.

Multiface madness

I have a CPC 6128 with *Utopia*, *Maxam 1.5*, *Protext* and a BASIC text-printing program, which I wrote and installed on ROM, in addition to the standard BASIC and disk operating system. I have recently bought a Multiface 2 and am surprised to find that it appears to conflict with *Protext* and *Utopia*, giving the messages:

```
*PROTEXT Checksum Error*
*UTOPIA Checksum Error*
```

...on reset. I have tried cleaning the edge connectors and making the Multiface 2 invisible. The latter usually, but not always, deletes the *Utopia* error message, but the *Protext* one remains exactly the same.

Given the unreliability of the edge connectors, I don't want to remove and refit the Multiface 2 frequently. Is it possible to fit a switch to any of its internal connections to enable it to be switched on or off electronically? If not, is there any other solution to this problem?

It is not clear from the literature whether the Multiface 2 is itself a ROM, requiring links to be placed in the ROM box to acknowledge its presence. Can you shed any light on this?

Julian Morley, Chester



It's that Multiface 2 picture again, which must be vying with the OCP Art Studio shot as the most used pic in AA over the last year.

The Multiface does have a ROM program inside it, which generates the display you see every time you press the red button. However, it's not mapped in the usual way, and will never conflict with any ROM in a ROM-board, so this definitely isn't the cause of your problem.

It is possible to disable the Multiface by means of a switch – in fact, the model of the Multiface 2 prior to the current one (which switches itself on and off automatically) had a manual switch to do just that. This will only disable the controller ROM, though, which shouldn't be much help, as this won't interfere with *Protext* and *Utopia*. There are many people out there running a Multiface with *Protext* and *Utopia*, yet none with this problem.

It sounds like the trouble is that you have a dodgy Multiface, which somehow is corrupting the information from the ROM-board, so causing *Protext* and *Utopia* to send false data and so generate a checksum error (Arnor's ROMs perform such a check, and it's certainly not unknown for a badly connected peripheral to generate such interference – it's happened to me before). If, as you say, the Multiface was recently purchased, send it back to Romantic Robot. Otherwise it's off to the repairman; try WTS (☎ 0582 491949) or Quantum Computing (☎ 0446 746920). **Richard**

Amstrad abuser

I have recently purchased for my retirement (a few years hence) a superb Amstrad CPC464 package with many files of programs, type-ins, etc (second-hand). Having completed a program and saved it to tape, what should happen – calamity – but an immovable and totally incomprehensible 'Syntax error' in line 160.

As you can see from the enclosed program, it is from an *Amstrad User* magazine which I cannot trace, so I thought, 'Ah, ring the Action man'. So please please can you help to untangle the reason why line 160 has a 'Syntax error'.

JL Burrow, Hertfordshire

Amstrad Computer User metamorphosed into the late *CPC Attack* before disappearing altogether, so it's down to us to look at the offending line:

```
160 cls$=esc$+"E"+home$
```

The reason that your CPC objects to this is the cls$ beginning the line. A command exists called

CLS (which clears the screen), so you can't use it for a variable name. The question, then, is why is this used in the listing?

Easy answer – the listing isn't meant for the CPC. The Amstrad PCW's version of BASIC (Mallard), you see, doesn't have a CLS command, and so you have to set up a string like this to clear the screen for you. So, unless you buy a PCW, the program will remain forbidden territory. Sorry. **Richard**

Routine work-out

I've been having a few problems lately that I can't work out, can you help please?
1 How can I cut a screen up into sections, save them and load each bit separately?
2 I need to write a routine that allows me to print letters any size (horizontally and vertically) on the screen. Can you tell me how to do this?
3 In Machine Code, how do I access RAM expansions (128K and 256K ones)?
4 How much do blank ROM chips (for a ROM-board) cost, and where can I get them?
5 How can I write a Machine Code sprite routine that doesn't delete the background (and please don't suggest using the AND logic operation, because that corrupts the colours of the sprite itself)?
Alistair James, Lowestoft

1 Here's how to write a save routine – a load routine is similar, but the other way around, if you see what I mean. First of all, open a file for output in the normal way, and write the width of the section (in bytes – there are 80 bytes across the screen, each byte being half a MODE 1 character, in every mode) and its height (also in bytes) to the file. You'll need them later.

Now take the co-ordinates of the top left-hand corner of the section (X in DE, Y – 0 to 199 – in HL), and CALL &BC1D. This will find the screen address of that corner, and place it in HL. You can then embark on a loop to output every byte of this row to disk, probably starting off with B containing the width of the section and using a DJNZ loop.

All you need to do after this is put another loop around the edge (probably using DEC C), so that this is repeated for each row. You can use CALL &BC26 to convert a screen address in HL into that of the next line down. Once this is finished, just close the file and it's all done.

2 Ouch. Nasty. First of all, you need to get the character data from somewhere. One way is to use the firmware routine at &BBA5; call this with A containing a character number, and the address of the matrix (you know, like the parameters you'd pass in a SYMBOL command) is returned in HL. (If it's in ROM, then carry is false, and you'll need to CALL &B906 to turn ROM on between &0000 and &3FFF; CALL &B909 to turn it off again.) Alternatively, you could try printing the text on the bottom line of the screen, and using TEST (or its machine code equivalent, &BBF0) to see what each character was made up of.

You then need to perform three nested loops; the outside loop deals with each character, one by one. The next loop (which will be executed eight times per character) should deal with each row of the character, and the inside loop (eight times per row) should deal with each column of each row. Test whether the appropriate column and row contain a set bit in the character, and if so, plot a large square (more loops, I'm afraid). Repeat this throughout all three loops – use of subroutines may prove helpful – and you should have a working routine.

3 That's an easier one to answer. In brief, you probably know that to access the extra 64K of a 6128, you use LD BC,&7FC4: OUT (C),C (or similar), where C4 is a number from C4 to C7 selecting which 16K is to be mapped in between &4000 and &7FFF of standard memory, or C0 to return to normal.

Bigger memory expansions are just as easy. For the next extra 64K, use CC to CF; for the 64K after that, D4 to D7; then you get DC to DF, and so on up until FC to FF. Remember, though, that just because D4 to D7 aren't accessible (ie, the user doesn't have a 256K memory expansion), E4 and E7 might be usable (ie, the user has a 256K silicon disk). The blocks are not necessarily contingouus.

4 There are three possible sources. Phil Craven's Avatar of Bradford supplies them very cheaply, but major reliability problems have been experienced with these. If you ever visit an All Formats Computer Fair, the stalls there sell them for £1 each (you want 27128 chips, by the way), and I've always found these chips pretty reliable. Failing that, Maplin (check out your local WH Smith's for a catalogue) are more expensive, selling the chips at £3.95 each, but these are guaranteed to be brand new – not second hand – and from a reputable manufacturer, and so are certain to work properly.



Want to know how to print letters of any size all over your CPC screen? Strangely enough, the letter titled 'Routine work-out' has the answer to this very question. Check it out.

By the way, you do have an EPROM programmer to program the chips, don't you? Just checking.

5 You like asking tricky questions, don't you? The answer to this one isn't simple, and varies depending on which mode you're in (MODE 2 is easy – simply use the OR logic operation – so we won't bother).

The basic principle for both MODEs 0 and 1 is the same, but the layout of each byte in screen memory varies. In MODE 0, the colour of the leftmost pixel of a byte is held in bits 1, 5, 3 and 7 (mask &AA), and the rightmost pixel in bits 0, 4, 2 and 6 (mask &55). MODE 1, which has four pixels per byte, stores the colour of the leftmost pixel in bits 3 and 7 (mask &88), the next in bits 2 and 6 (&44), the next in bits 1 and 5 (&22), and the rightmost pixel in bits 0 and 4 (&11).

For the first pixel, take the byte of sprite data, and perform an AND operation with the appropriate mask to isolate this pixel's colour. If the result is zero (upon which the zero flag will be set), then the colour of this pixel in the sprite is ink 0, so we can carry on to the next pixel. Otherwise, take the appropriate byte from the screen, and NAND it with the mask to wipe out the pixel from the screen data. Since the Z80 doesn't have a NAND instruction, then work out in your head what the mask XOR 255 is, and use an AND with this value instead.

Repeat this for each pixel of the byte, and you can then place the corrected value back into screen memory. Repeat the whole lot for every byte in the sprite, and there you have it – one transparent sprite. If you're still having no luck, write and tell us. **Richard**

Pick a number

How do I generate a random message in BASIC? I know how to use READ and DATA to store the messages, but I'm stumped as to how to get a random number between one and ten. On my old computer you could just type RND(10), but this doesn't seem to work on the Ammy. Please help (I have a CPC6128).
David Foley, Guildford

The Amstrad's RND function, which doesn't need anything following in brackets (although you can have a number there if you like), generates a random number between 0 and 0.999 recurring – ie, just under one. To scale it to a random number between 0 and 9.9999 (just under 10), multiply by ten – so you'd type RND*10, which can be turned into a whole number between 0 and 9 by using INT (RND*10). Finally, to change it into the range 1 to 10, simply add one. For example, here's a typical random message subroutine:

```
10 RESTORE 60
20 FOR n=1 TO INT (RND*10)+1
30 READ a$
40 NEXT
50 PRINT a$
60 DATA message 1 here
70 DATA message 2 here
```

...and so on. It's not quite so straightforward, but it works. **Richard**

A vintage year?

In a year when the doom-merchants moaned about the decline of the CPC, and indeed, games were thin on the ground, the serious software side of the machine continued going strong. Simon Forrester takes a look back at the serious side of '93.

Comparator A Multiface POKE finding package that, though it takes quite a bit of technical knowledge to get it going, is really quite groovy. Unfortunately, it's 128K and disk only, but you can get full details from issue one-oh-oh.

Disc Imager Quite a handy utility from STS that takes care of the huge expense of 3-inch disks by letting you back them up on to 3.5-inch disks (fitting several on to one disk). Unfortunately, it was narrowly pipped to the post by SafeSoft's *Disc Archiver*, but you can't win 'em all, can you? See *AA98*.

Gripper From Verysoft, creators of *Comparator*, here's a package to help you rip sprites out of games. Yes – it's a bit odd, isn't it? This package came up against Sentinel Software's *TUSS* and won. Hurrah! Take a look at *AA97*.

Hackit Siren Software's plug-in hacking device. In fact, it's a hell of a lot more, as the box allows you to freeze the computer at any time and take a look at the whole memory as it was when it was frozen. An indispensable programming tool.

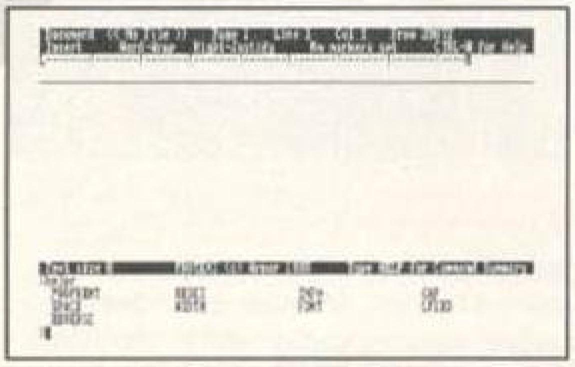
Micro Design 2 Campursoft's DTP package impressed Tim Norris, who reviewed it at the time. That's because it's really very good indeed. Isn't it wonderful what you can do with mirrors? Yes. *Micro Design 2* is wonderful. Check out *AA94* for the full review.

MS/800 Featured in *AA89*'s DOS round-up, MS/800 is Microstyle's contribution to the field. It was quite a reasonable little package, but had the misfortune of not coming on ROM – users had to load up the package after every reset.

Page Publisher Sadly neglected in the DTP feature of ish 99, SD Microsystems' own package seems to have wasted the competition completely. I suppose it does make us look incredibly naff for not including it in the first place, but it got what it deserved in the end – an 85 per cent rating (which, on reflection, it deserves more than) in AA100.

ParaDOS Furthering the field of mass DOS analysis, Quantum gave us another chance to see what happens when we throw yet another DOS system into a sea of little ROM chips containing DOS systems. And lo, it was good, and people bought it (so they should). See *AA99*.

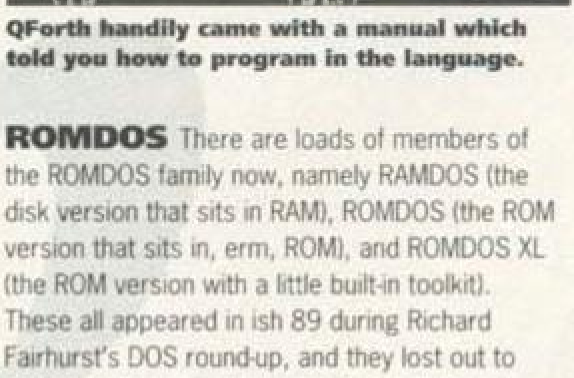
Proprint Part of the reason for the Richard Wildey versus Peter Campbell title fight was the dispute over *Protext* print enhancers. Campursoft's was reviewed in *AA94*, and won.



In the battle of the Protext print enhancers Proprint from Campursoft came out tops.

Pro–Ext Richard Wildey's *Pro–Ext* was reviewed in *AA95*, and lost. It was a game of two issues, with a winner and a loser. There were two issues, a winner, and loser. The loser was Sentinel, and nothing will change that.

QForth Does anyone ever understand these technical packages? I'm sure I don't, but I can't say that too loudly, because I'm supposed to be the know-it-all in the office, and it's not going to look very good at all if I start admitting that I don't know things. But I did know was that QForth was good. See *AA97* for more waffling.



QForth handily came with a manual which told you how to program in the language.

ROMDOS There are loads of members of the ROMDOS family now, namely RAMDOS (the disk version that sits in RAM), ROMDOS (the ROM version that sits in, erm, ROM), and ROMDOS XL (the ROM version with a little built-in toolkit). These all appeared in ish 89 during Richard Fairhurst's DOS round-up, and they lost out to S/DOS, but personally I think there's little in it.

S/DOS Well what'd'y'know? It's the winner – STS's S/DOS. Despite a few allegations to another effect, it won the round-up because it was the best DOS system around at the time.

SDA Why am I telling you about this one? It's good, it was reviewed in *AA94* and received a flippin' high score at the time, and it's now available in a much simpler form – you'll find it in this month's Type-Ins section. Thanks, SafeSoft.

SmArt Plus Reviewed in *AA96*, this is an art package designed specifically for the Plusses. This means that it could handle extra colours, different resolutions and full overscan screens (though overscan isn't a Plus-only feature). Unfortunately, unless you were using these effects in your work, there wasn't really much to set this package above any other art package around, but Plus owners might still be interested in taking a look.

Soundtrakker *AA92* saw the review of this truly amazing continental soundtracking utility (which, though I shouldn't really say this, blew the hell out of the version of *BooTracker* we put on the covertape). Tim 'the muso' Norris reviewed it, and loved it.

TUSS *TUSS* stands for *The Ultimate Sprite Searcher* which was, to say the least, unfortunate, because it wasn't. In fact, it was beaten soundly by Verysoft's *Gripper*. Bad luck, Sentinel.

Xexor For crying out loud, how many more DOS packages do we need? If I see another one, I'm going to go out and butcher small children. *Xexor*, as it turns out, is probably the best DOS package you can get your hands on at the moment, which is bad luck for STS's S/DOS, as it was the clear winner before this one came along. See *AA96* for the full details.

Zack It's amazing! There's actually a package from Quantum that has absolutely nothing to do with disk drives! Instead, this one's a full games creation package with its own sprite and graphics designer, music package, and full dedicated language. It's also unfinished, which is a pity, but if it ever sees the light of day, we'll let you know. Take a look at *AA98* for the full bit on what it does and doesn't do.

ZXM Why does so much computer software have Qs, Zs or Xs in their names? This one is actually a Spectrum emulator, so you can run all your old Speccy games on a CPC. The only problem is that it does have a problems running the large majority of Speccy games, but for a bit of a nostalgic trip, it's not a bad little fing. See *AA96*.

400K/S Aargh! It's another DOS package. All small families had better watch out...

Addresses

I don't know about you, but a long list of addresses here seemed a bit pointless when you could just turn to the Amscene Directory on page nine (*you're just too lazy to type them – Dave*).

Public Image

Logistic

Game Review

By Fraggle of Moving Pixels
Available from Amsof PD and The Vault (see Amscene Directory page 9)

Have you ever played *Atomic* on the Amiga? If you have, you should recognise this latest Fraggle offering, as it brings the same microscopic madness to the CPC.

Despite the title, there really isn't all that much to this game. What you're given is a simple squared grid on which two opposing players place different-coloured chips. The chips can be piled on top of each other, up to a maximum of five at which point four of the tiles are placed on to the surrounding squares. When this happens, any enemy chips which are in one of the adjoining squares change to your colour. To win, you must completely fill the grid with your chips.

It may sound intriguing, but *Logistic* isn't much fun, because, owing to wholly unpredictable chain reactions, winning the games has more to do with luck than skill. Although the coding and presentation are up to Fraggle's usual impeccably high standards, the gameplay just isn't there. Despite the wealth of play options, the concept never works, and given just a few minutes you'll be completely fed up with the game. You'd be far better off purchasing my favourite public domain game, *Spots*, which is based on a similar idea, but plays about a hundred times better.

65%



The statistics bit of Logistic – you win more through sheer luck than skill or judgement.



You'd need to be a mathematical genius to work out some of the chain reactions.



It's one of the games in which you can dominate the board completely, then the computer makes one move and everything changes colour.



I reckon logic is overrated. Give me imaginative guesswork any day. Live dangerously!

Cheese

Serious Review

By Antoine of MMPF/Lamer System
Available from Amsof PD and The Vault (see Amscene Directory page 9)



I remember when lamer was an abusive term – what is the world coming to?

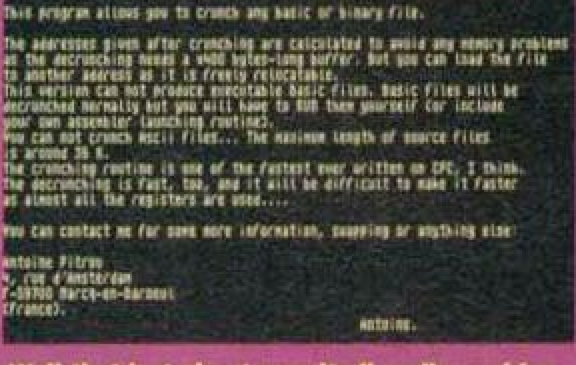
Despite the rather strange name, *Cheese* is a utility for compressing BASIC and Machine Code files, which the author claims to be better than Crown's crunchers, the universally accepted ultimate in compression programs.

I decided to put this claim to the test by running the same 18K file through Crown's *Crunch* and *Turbo Imploder*, as well as Antoine's *Cheese* (I know it sounds funny, but I'll resist the temptation to make any cheesy jokes). And the result? Both *Cheese* and *Imploder* shrunk the file down to 14K, while *Crunch* managed to go a kilobyte further and got it down to 13K. *Cheese* was the fastest of the three, doing its work in just eight seconds, compared to the whopping 11 minutes 35 seconds taken by *Crunch*. However, *Turbo Imploder* only lagged three seconds behind *Cheese*.

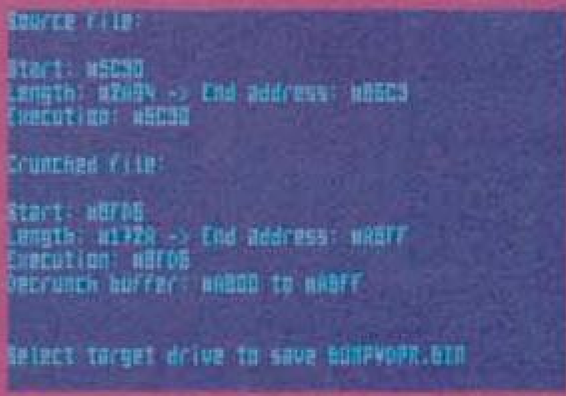
In addition, when the file was crunched and then imploded, it came down to just 11K, while a combination of *Crunch* and *Cheese* only brought it to 12K. Also worthy of mention is that *Cheese* can only handle files up to 36K, compared to the 42K of the Crown utilities.

With every file tried, the pattern remained the same. So while *Cheese* certainly comes close, apart from a marginal time differential, it fails in its claim to better Crown's compressors.

84%



Well that just about says it all really, making this caption pretty much a redundant feature.



Why this file compressor goes by the name of Cheese is never made entirely clear.

Updates

- Prodatron's *Digitrakker* (reviewed last month) has already been updated to include a powerful sample editor, English instructions and a *Protracker* MOD file converter. All of these almost entirely wipe out the few criticisms I had in the review, while even more features have been added, and some small bugs dealt with.
- Also updated is Joker's *BMP-Convert* (reviewed AA99), which now converts screens considerably faster than it did before.

RC Quest

By Jaysoft of Moving Pixels
Available from Amsof PD and The Vault (see Amscene Directory page 9)

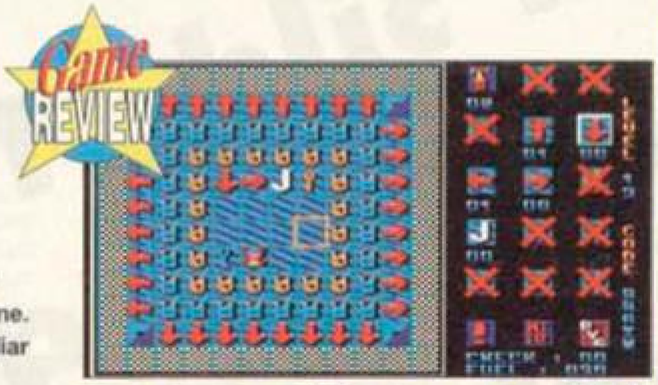
You've guessed it – yet another brilliant puzzle game from the MOPS stable. This isn't a Fraggle production, though, but from Jaysoft of *Spots* fame.

So what's involved then? Well, you're all familiar with the game *Lemmings*, right? Good. Now imagine that all the lemmings are squeezed into one car. Once you start it, the car won't stop, and will continue to drive in a straight line over a squared grid, no matter what's in front of it – just the sort of thing you'd expect of a car full of lemmings! It's your job to change the board so that the car will have safe passage to an exit before you start the car moving.



This looks uncannily like a map of Bath's one-way road system.

You do this by placing things like arrows and jumps on the board. These, and many other useful objects, are chosen from the huge selection of icons on the right of the screen. Unfortunately, though, there are only a limited number of objects you can use on any one level, and you can only put them in free spaces – unless you destroy something already on the board, but this is something you can only do a specified number of times per level. There's also a limit on how far your car can go, as it only has so much fuel, so you have to find the quickest route possible. You may also have to make sure your car passes over some markers before it reaches the exit to complete the level.



Where there's a will there's a way. Especially if it bequeaths you a map showing the way out.

As you progress through the 25 levels, you'll discover that they are cunning designed to make you come up with increasingly complicated solutions. However, the level of difficulty is just right, ensuring that your progress will be steady enough to maintain your interest. This provides excellent gameplay, that will definitely keep you hooked until you finish the game.

As for the presentation, the graphics are bright and colourful, and you have the choice or playing with a rather irritating tune, or some decent sound effects (guess which one I favour). Instructions would have been very useful, though.

There is, however, the bonus of an excellent level editor, and passwords are provided for every level.

89%



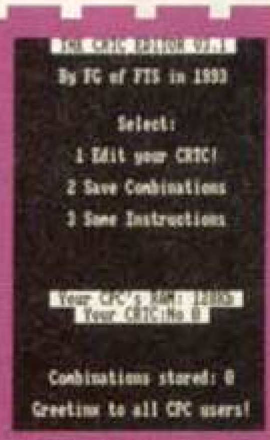
RC Quest boasts more icons than a decades-worth of Smash Hits Yearbooks.

FG of FTS utilities

Available from Amsof PD (see Amscene page 9)

Our Greek friend, FG of FTS, has recently released a few simple utilities to help the less-than-genius coders among us. Here's a short description of what each of them does :

- *CRTC*: This utility makes programming your CRTC (Cathode Ray Tube Controller) a cinch. The CRTC is useful for changing the size and position of the CPC screen, and using this program you can play around with it simply by choosing a CRTC register and pressing up and down on the cursor keys. The program will then save your chosen settings as a simple BASIC listing which can be easily incorporated into your own programs.
- *SOS*: Standing for Sprite OCP System, *SOS* allows you to use *OCP Advanced Art Studio* as a handy sprite designer. Simply design your sprites using *OCP*'s wonderful facilities and save them as a standard 17K screen. You can then load your screen of sprites into *SOS*, which, with a bit of simple information regarding mode and sprite size, will then convert them into a standard sprite file.
- *VGA*: VGA helps you to (can you guess it?) program the Video Gate Array to do such wonderful things as change raster colours. Simply tell it what you want done, and it'll give you back the VGA value necessary or the OUT command to use. It's also possible to reverse the process, and find out what certain VGA values do.



CRTC – Cathode Ray Tube Controller.



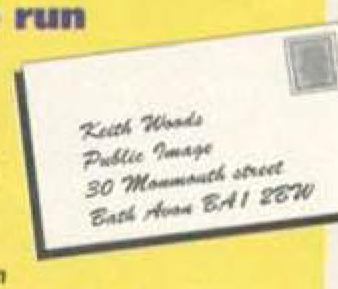
FG of FTS? I'm sure that was a clue in The Times crossword a couple of weeks back.

All three programs in the set are well presented; they're extremely user-friendly and include simple instructions. While techie-heads will no doubt scoff at these programs, for many novice programmers, they should prove a valuable tool.

80%

Backchat

VT on the run



A friend of mine, H McIntosh, wrote to you in connection with an article in issue 94 (July) regarding a program called *Run VT* which did not state which PD library this is available from, but has received no reply. Can you help please?

I also wrote approximately two months ago to three public domain libraries and enclosed SAEs. Only one has replied. The other two, including Presto PD, have not had the courtesy. Can you help here?
S Carnegie, Scotland

Run VT is available from Wacci's PD library and Amsof PD. You should find their addresses in the Amscene Directory. As regards the problems you have had with replies from PD libraries, to be fair to Presto, this may have much to do with the fact that it has changed address on numerous occasions, so the delay may possibly be due to you writing to an old address.

But I do often hear complaints about people *not* getting replies from PD libraries. So come on librarians, treat you customers with respect. Even if you don't intend to cash their cheques, writing back to people who contacted you is the decent thing to do. If someone feels that they've been badly treated by one PD library this can reflect on all the others.



Adventuring tapes

I have only recently started using the excellent Adventure PD and I am saddened to see that it must close. That was why I was so pleased when I read Whisperings in *AA96* and found out that the service is being taken over by DARTSMA PD.

Oh dear, a slight problem arises. I have a CPC 464, and no disk drive. I am unable, therefore, to use this service. This is, as I'm sure you can imagine, quite distressing, as Adventure PD was the best PD service I'd used to date. Is any other PD service going to take over the tape section, or must I do it myself?
Chris Spicer, Coventry

PD libraries for tape users are few and far between, as copying tapes takes such a long time, and I've heard nothing about anyone taking over Adventure PD's excellent service. However, if you are serious about taking over the tape service yourself, and are sure you know what you're letting yourself in for, then I'm sure Debby would be pleased to hear from you.



Type-Ins

We've got one hell of a scoop this month – a full commercial program for you to type in. Simon supplies the other words.

There's only one main program this month (you'll find a tiddler somewhere, though), and it used to be a commercial release. You see, the boys at SafeSoft decided to donate us a copy of the SafeSoft disk archiver, just for us. That's right – the full thing is here, in all its glory, with in-built instructions, so just type in the program and run it.

Before you go any further though, bear in mind that this prgram will only work if you have a 3-inch drive, a 3.5-inch drive and a high capacity disk operating system.

Anyway, on with the listing:

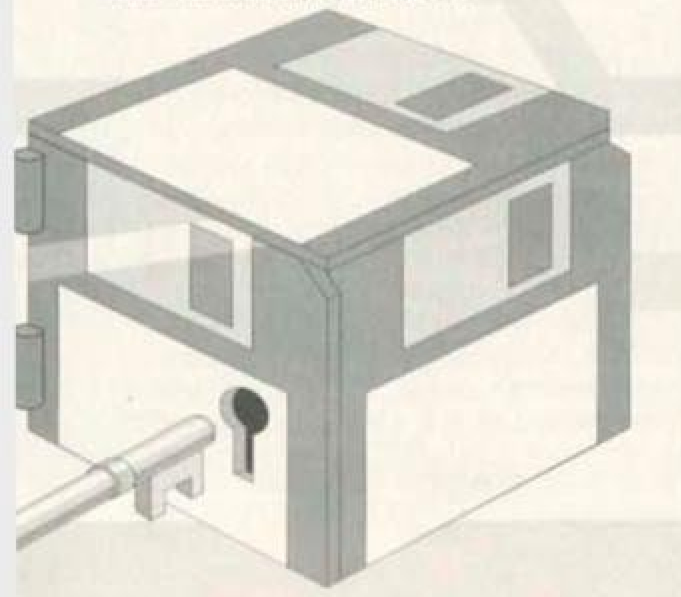


How could you resist a program like this?

```
DADE 10·addr=&4000
CAEE 20·READ·b$
GACA 30·IF·b$="**"THEN·CALL·&4000
FAJO 40·POKE·addr,VAL("&"+b$)
EAEF 50·addr=addr+1
CABE 60·GOTO·20
FAKA 70·DATA·C3,36,41,21,11,40
FAJK 80·DATA·7E,FE,FF,C8,CD,5A
FAMC 90·DATA·BB,23,C3,06,40,04
FAAD 100·DATA·01,1C,00,00,00,1C
FAHF 110·DATA·01,1A,1A,1C,02,0D
FAFF 120·DATA·0D,1C,03,06,06,1D
FAJK 130·DATA·00,00,FF,7E,FE,FF
FABK 140·DATA·C8,FE,7E,CC,37,40
FABJ 150·DATA·CD,5A,BB,23,C3,27
FAOJ 160·DATA·40,3E,0D,CD,5A,BB
FANK 170·DATA·3E,0A,C9,D5,E5,CD
FABI 180·DATA·47,40,E1,D1,C9,6F
FACF 190·DATA·26,00,11,0A,00,CD
FAPC 200·DATA·53,40,11,01,00,3E
FAOJ 210·DATA·FF,3C,37,3F,ED,52
FAEF 220·DATA·D2,55,40,19,C6,30
FAIH 230·DATA·C3,5A,BB,21,E1,40
FALC 240·DATA·06,08,36,20,23,10
FAIF 250·DATA·FB,06,00,21,E1,40
FACM 260·DATA·CD,06,BB,FE,0D,CA
FAIL 270·DATA·B8,40,FE,FC,CA,C0
FAKJ 280·DATA·40,FE,7F,CA,C3,40
FAKH 290·DATA·4F,D6,30,DA,72,40
FAGI 300·DATA·D6,0A,DA,A8,40,79
FAFH 310·DATA·D6,41,DA,72,40,D6
FAJI 320·DATA·1A,DA,A8,40,79,D6
FABH 330·DATA·61,DA,72,40,D6,1A
FACH 340·DATA·DA,A8,40,C3,72,40
FABI 350·DATA·78,FE,08,CA,72,40
FACJ 360·DATA·79,77,CD,5A,BB,04
FACH 370·DATA·23,C3,72,40,78,FE
FACH 380·DATA·00,CA,C0,40,37,C9
FALI 390·DATA·37,3F,C9,78,FE,00
FACI 400·DATA·CA,72,40,3E,08,CD
FAMJ 410·DATA·5A,BB,3E,20,CD,5A
FABL 420·DATA·BB,3E,08,CD,5A,BB
FAAF 430·DATA·2B,36,20,05,C3,72
FACD 440·DATA·40,42,3A,20,20,20
FAAD 450·DATA·20,20,20,20,20,2E
FAMH 460·DATA·53,44,41,CD,19,BD
FALK 470·DATA·CD,09,BB,FE,00,C8
FAOI 480·DATA·C3,ED,40,3E,C9,32
FALH 490·DATA·5A,BB,11,00,50,CD
FAMK 500·DATA·9B,BC,F5,3E,CF,32
FAEK 510·DATA·5A,BB,F1,C9,DF,10
FAKF 520·DATA·41,C9,66,C6,07,00
FAEJ 530·DATA·DF,18,41,C9,4E,C6
FADG 540·DATA·07,00,DF,20,41,C9
FALG 550·DATA·52,C6,07,00,DF,28
FAKF 560·DATA·41,C9,81,C5,07,00
FAGK 570·DATA·3E,FF,DF,32,41,C9
FADI 580·DATA·72,CA,07,00,CD,2C
FADF 590·DATA·41,CD,03,40,21,45
FAKH 600·DATA·41,CD,27,40,C3,9F
FAFD 610·DATA·41,0F,01,20,20,53
FAMF 620·DATA·61,66,65,53,6F,66
FAGE 630·DATA·74,20,44,69,73,63
FAGE 640·DATA·20,41,72,63,68,69
FAID 650·DATA·76,65,72,20,20,20
FABD 660·DATA·20,20,20,20,20,A4
FAJD 670·DATA·31,39,39,33,20,20
FAFD 680·DATA·20,0F,03,20,20,20
FAEF 690·DATA·20,46,6F,72,20,48
FAHE 700·DATA·69,67,68,20,43,61
FAPE 710·DATA·70,61,63,69,74,79
FAJD 720·DATA·20,42,20,44,72,69
FANG 730·DATA·76,65,20,4F,77,6E
FAFD 740·DATA·65,72,73,20,20,20
FALD 750·DATA·20,1A,00,27,03,18
FAPI 760·DATA·FF,21,E3,41,CD,27
FAKJ 770·DATA·40,CD,ED,40,3E,3C
FAAK 780·DATA·CD,1E,BB,C2,69,42
FAJK 790·DATA·3E,32,CD,1E,BB,C2
FAKI 800·DATA·4B,44,3E,45,CD,1E
FAKI 810·DATA·BB,C2,F1,46,3E,36
FACK 820·DATA·CD,1E,BB,C2,0A,47
FAHL 830·DATA·3E,3E,CD,1E,BB,C2
FAMI 840·DATA·23,47,3E,2C,CD,1E
FABK 850·DATA·BB,C2,6C,47,3E,3F
FAML 860·DATA·CD,1E,BB,C2,E7,4B
FAEH 870·DATA·C3,A8,41,0C,0F,02
FACF 880·DATA·20,50,6C,65,61,73
FANF 890·DATA·65,20,73,65,6C,65
FAIF 900·DATA·63,74,7E,0F,01,20
FAKE 910·DATA·20,0F,03,53,0F,01
FAIF 920·DATA·74,6F,72,65,20,64
FAEF 930·DATA·69,73,63,7E,20,20
FAFF 940·DATA·0F,03,52,0F,01,65
FAKF 950·DATA·74,72,69,65,76,65
FAPF 960·DATA·20,64,69,73,63,7E
FAKD 970·DATA·20,20,43,61,74,61
FACH 980·DATA·6C,6F,67,75,65,20
FAJC 990·DATA·0F,03,41,0F,01,7E
FADE 1000·DATA·20,20,20,20,20,20
FAEE 1010·DATA·20,20,20,20,20,20
FALI 1020·DATA·0F,03,42,0F,01,7E
FAEH 1030·DATA·20,20,0F,03,43,0F
FACK 1040·DATA·01,6F,6C,6F,75,72
FAAI 1050·DATA·20,73,77,61,70,7E
FAMH 1060·DATA·20,20,0F,03,48,0F
FAII 1070·DATA·01,65,6C,70,7E,20
FAII 1080·DATA·20,45,0F,03,78,0F
FAKM 1090·DATA·01,69,74,7E,FF,CD
FALK 1100·DATA·ED,40,21,B3,43,CD
FAAJ 1110·DATA·27,40,CD,63,40,D2
FAMH 1120·DATA·9F,41,3E,01,32,00
FAKN 1130·DATA·A7,CD,F9,40,CA,C6
FABJ 1140·DATA·46,21,B6,00,ED,52
FAMH 1150·DATA·D2,23,43,3E,00,32
FAEM 1160·DATA·00,A7,CD,F9,40,CA
FADL 1170·DATA·C6,46,3A,9F,A8,32
FAGL 1180·DATA·ED,4B,21,DF,40,06
FAPJ 1190·DATA·0E,11,00,50,CD,8C
FAGO 1200·DATA·BC,3A,ED,4B,CD,95
FABL 1210·DATA·BC,21,1F,44,CD,27
FAMJ 1220·DATA·40,3E,00,32,EE,4B
FAIL 1230·DATA·06,28,C5,3A,EE,4B
FAIM 1240·DATA·CD,3F,40,3E,08,CD
FANO 1250·DATA·5A,BB,CD,5A,BB,3A
FAKM 1260·DATA·ED,4B,32,EF,4B,06
FAFI 1270·DATA·09,C5,21,00,58,3A
FACO 1280·DATA·EE,4B,57,3A,EF,4B
FABL 1290·DATA·4F,1E,00,CD,0C,41
FACL 1300·DATA·CD,92,43,3E,00,CD
FAAI 1310·DATA·95,BC,21,00,58,11
FAEL 1320·DATA·00,02,7E,CD,95,BC
FANK 1330·DATA·23,1B,7B,B2,FE,00
FAEM 1340·DATA·C2,F0,42,3A,EF,4B
FAAL 1350·DATA·3C,32,EF,4B,C1,10
FADN 1360·DATA·CA,3A,EE,4B,3C,32
FAHN 1370·DATA·EE,4B,C1,10,A9,CD
FAAM 1380·DATA·8F,BC,21,36,44,CD
FALM 1390·DATA·27,40,CD,ED,40,CD
FACK 1400·DATA·06,BB,C3,9F,41,21
FAGL 1410·DATA·2F,43,CD,27,40,CD
FANL 1420·DATA·06,BB,C3,9F,41,7E
FAAJ 1430·DATA·7E,54,68,65,72,65
FADJ 1440·DATA·20,69,73,20,6E,6F
FALJ 1450·DATA·74,20,65,6E,6F,75
FAGH 1460·DATA·67,68,20,73,70,61
FABJ 1470·DATA·63,65,20,6F,6E,20
FABJ 1480·DATA·74,68,65,20,6C,69
FAPH 1490·DATA·62,72,61,72,79,64
FAAJ 1500·DATA·69,73,63,21,FF,21
```







What does it do, then?

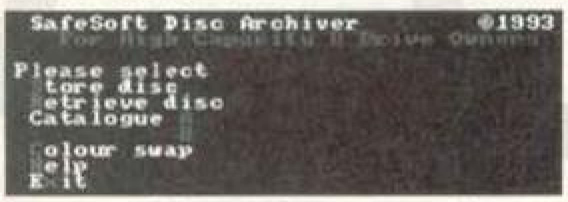
Quite a bit. If you want even more details, just dig up the original review (ish 94), but for now settle with a short explanation:

Quite simply, what this package will allow you to do is to backup your 3-inch disks on to a 3.5-inch disk drive, fitting a minimum of four sides on to one 3.5-inch disk. The built-in compression system means you should be able to manage a bit more than that. Here are the main options:

- **Store disk** Insert your source disk into your 3-inch A drive, your 3.5-inch storage disk into the B drive, and simply enter the filename of the archive. The data will be compressed as it whizzes on over to your high density drive, though compression rates vary depending on what's stored on the disk.
- **Retrieve disk** With your storage disk in drive B, and your destination disk in drive A, state the filename of your archive, and let *SDA* decompress the data and put it back on to the 3-inch disk. If the disk is the wrong format, *SDA* will reformat it, though it'll ask you first (we don't want to overwrite the wrong disk now, do we?).
- **Catalogue A/B** Gives a catalogue of either drive – this is useful for checking how much space you've got left on your B drive for more archives.



```
FAHL 1510·DATA·6B,43,CD,27,40,CD
FAOL 1520·DATA·06,BB,C3,9F,41,7E
FAIJ 1530·DATA·7E,54,68,65,20,6C
FAAI 1540·DATA·69,62,72,61,72,79
FABH 1550·DATA·20,64,69,73,63,20
FADI 1560·DATA·69,73,20,77,72,69
FAHI 1570·DATA·74,65,20,70,72,6F
FADI 1580·DATA·74,65,63,74,65,64
FAGI 1590·DATA·21,FF,21,00,58,11
FAMJ 1600·DATA·00,02,7E,47,7E,B8
FABM 1610·DATA·C0,23,1B,7A,B3,FE
FAJL 1620·DATA·00,C2,9A,43,3E,FF
FAON 1630·DATA·CD,95,BC,78,CD,95
FAFN 1640·DATA·BC,E1,C3,FD,42,0C
FABH 1650·DATA·20,20,20,50,6C,65
FALI 1660·DATA·61,73,65,20,69,6E
FAKH 1670·DATA·73,65,72,74,20,74
FADI 1680·DATA·68,65,20,64,69,73
FACI 1690·DATA·63,20,74,6F,20,62
FACH 1700·DATA·65,20,61,72,63,68
FAKJ 1710·DATA·69,76,65,64,69,6E
FALI 1720·DATA·74,6F,20,64,72,69
FAHH 1730·DATA·76,65,20,41,2C,20
FAAJ 1740·DATA·74,68,65,20,6C,69
FAGH 1750·DATA·62,72,61,72,79,20
FABI 1760·DATA·64,69,73,63,20,69
FABJ 1770·DATA·6E,20,64,72,69,76
FAHH 1780·DATA·65,20,42,2C,20,61
FAKI 1790·DATA·6E,64,20,73,74,61
FAMG 1800·DATA·74,65,20,61,20,66
FAPK 1810·DATA·69,6C,65,6E,61,6D
FALL 1820·DATA·65,3A,0F,03,FF,0F
FACJ 1830·DATA·01,7E,7E,41,72,63
FAEK 1840·DATA·68,69,76,69,6E,67
FACI 1850·DATA·20,74,72,61,63,6B
FAFL 1860·DATA·3A,0F,03,FF,0F,01
FADK 1870·DATA·7E,7E,41,72,63,68
FAFJ 1880·DATA·69,76,65,20,63,6F
FADK 1890·DATA·6D,70,6C,65,74,65
```



Go on – type it in. You know you want to.

```
FAEN 1900·DATA·FF,CD,ED,40,21,0A
FAOK 1910·DATA·45,CD,27,40,CD,63
FANK 1920·DATA·40,D2,9F,41,21,DF
FAJC 1930·DATA·40,06,0E,11,00,50
FAHN 1940·DATA·CD,77,BC,D2,C6,46
FAPM 1950·DATA·AF,32,00,A7,CD,F9
FAEM 1960·DATA·40,3A,9F,A8,32,ED
FAMN 1970·DATA·4B,CD,80,BC,21,ED
FAHN 1980·DATA·4B,BE,77,C2,BD,45
FAFK 1990·DATA·21,8D,45,CD,27,40
FALJ 2000·DATA·3E,00,32,EE,4B,06
FAGN 2010·DATA·28,C5,3A,EE,4B,CD
FAEL 2020·DATA·3F,40,3E,08,CD,5A
FAMP 2030·DATA·BB,CD,5A,BB,3A,ED
FAHK 2040·DATA·4B,32,EF,4B,06,09
GAAA 2050·DATA·C5,CD,80,BC,FE,FF
FAGJ 2060·DATA·CA,F6,44,21,00,58
FAHJ 2070·DATA·11,00,02,CD,80,BC
FAOL 2080·DATA·77,23,1B,7A,B3,FE
FAGN 2090·DATA·00,C2,B3,44,21,00
FAKL 2100·DATA·58,3A,EE,4B,57,3A
FACN 2110·DATA·EF,4B,4F,1E,00,CD
FAAL 2120·DATA·14,41,3A,EF,4B,3C
FALL 2130·DATA·32,EF,4B,C1,10,CA
FAGN 2140·DATA·3A,EE,4B,3C,32,EE
FACM 2150·DATA·4B,C1,10,A9,CD,7A
FAGL 2160·DATA·BC,21,A5,45,CD,27
FAFM 2170·DATA·40,CD,ED,40,CD,06
FAOM 2180·DATA·BB,C3,9F,41,CD,80
FAMH 2190·DATA·BC,32,00,58,21,00
FAEI 2200·DATA·58,11,01,58,01,FF
FAIK 2210·DATA·01,ED,B0,C3,C0,44
FADH 2220·DATA·0C,20,20,20,50,6C
FAFH 2230·DATA·65,61,73,65,20,69
FAEI 2240·DATA·6E,73,65,72,74,20
FANI 2250·DATA·74,68,65,20,6C,69
FADH 2260·DATA·62,72,61,72,79,20
FAOH 2270·DATA·64,69,73,63,20,69
```

```
FADL 2280·DATA·6E,74,6F,7E,64,72
FANI 2290·DATA·69,76,65,20,42,2C
FALH 2300·DATA·20,61,6E,64,20,79
FAEI 2310·DATA·6F,75,72,20,64,65
FAOI 2320·DATA·73,74,69,6E,61,74
FAPJ 2330·DATA·69,6F,6E,20,64,69
FAJI 2340·DATA·73,63,20,69,6E,74
FAHK 2350·DATA·6F,7E,64,72,69,76
FAFH 2360·DATA·65,20,41,2E,20,54
FAKJ 2370·DATA·68,65,6E,2C,20,67
FAFI 2380·DATA·69,76,65,20,74,68
FAIJ 2390·DATA·65,20,6E,61,6D,65
FABI 2400·DATA·20,6F,66,20,74,68
FAPJ 2410·DATA·65,7E,73,6F,75,72
FAII 2420·DATA·63,65,20,66,69,6C
FAJL 2430·DATA·65,3A,0F,03,FF,0F
FAGJ 2440·DATA·01,7E,7E,52,65,74
FALJ 2450·DATA·72,69,65,76,69,6E
FAFH 2460·DATA·67,20,74,72,61,63
FAKM 2470·DATA·6B,3A,0F,03,FF,0F
FAKJ 2480·DATA·01,7E,7E,52,65,74
FAFJ 2490·DATA·72,69,65,76,61,6C
FAOJ 2500·DATA·20,63,6F,6D,70,6C
FABJ 2510·DATA·65,74,65,21,FF,21
FAMK 2520·DATA·7A,46,CD,27,40,3E
FAEO 2530·DATA·2B,CD,1E,BB,C2,D6
FAKN 2540·DATA·45,3E,2E,CD,1E,BB
FABK 2550·DATA·C2,74,46,C3,C3,45
FAHM 2560·DATA·CD,7D,BC,3E,00,32
FAKL 2570·DATA·00,A7,CD,F9,40,3A
FAAO 2580·DATA·ED,4B,FE,41,CC,24
FAGN 2590·DATA·46,FE,C1,CC,4C,46
FAAI 2600·DATA·22,C4,46,3E,00,32
FAKJ 2610·DATA·C3,46,06,28,C5,2A
FALJ 2620·DATA·C4,46,3A,C3,46,06
FAMG 2630·DATA·09,77,23,23,23,23
FAMK 2640·DATA·10,F9,2A,C4,46,1E
FAKK 2650·DATA·00,3A,C3,46,57,CD
FAJJ 2660·DATA·1C,41,D2,08,46,3A
FAAK 2670·DATA·C3,46,3C,32,C3,46
FAKK 2680·DATA·C1,10,D7,C3,5A,44
FAKH 2690·DATA·21,28,46,C9,00,00
FACF 2700·DATA·41,02,00,00,46,02
FAIE 2710·DATA·00,00,42,02,00,00
FAHF 2720·DATA·47,02,00,00,43,02
FAAF 2730·DATA·00,00,48,02,00,00
FAMF 2740·DATA·44,02,00,00,49,02
FAHF 2750·DATA·00,00,45,02,21,50
FABI 2760·DATA·46,C9,00,00,C1,02
FABG 2770·DATA·00,00,C6,02,00,00
FAKH 2780·DATA·C2,02,00,00,C7,02
FAAG 2790·DATA·00,00,C3,02,00,00
FAGH 2800·DATA·C8,02,00,00,C4,02
FAPF 2810·DATA·00,00,C9,02,00,00
FAJN 2820·DATA·C5,02,CD,7D,BC,C3
FAGL 2830·DATA·9F,41,7E,7E,54,68
FALH 2840·DATA·65,20,64,65,73,74
FAMK 2850·DATA·69,6E,61,74,69,6F
FAPI 2860·DATA·6E,20,64,69,73,63
FAMH 2870·DATA·20,69,73,20,74,68
FADK 2880·DATA·65,20,77,72,6F,6E
FADK 2890·DATA·67,20,66,6F,72,6D
FAMH 2900·DATA·61,74,0F,01,52,65
FAPJ 2910·DATA·66,6F,72,6D,61,74
FAMH 2920·DATA·20,61,6E,64,20,63
FAML 2930·DATA·6F,6E,74,69,6E,75
FALJ 2940·DATA·65,3F,20,28,59,2F
FAGJ 2950·DATA·4E,29,FF,00,00,00
FAOJ 2960·DATA·21,D2,46,CD,27,40
FADN 2970·DATA·CD,06,BB,C3,9F,41
FADM 2980·DATA·7E,7E,4F,6E,65,20
FAFK 2990·DATA·6F,66,20,6F,75,72
FABH 3000·DATA·20,64,69,73,63,73
FAAI 3010·DATA·20,69,73,20,6D,69
FAJI 3020·DATA·73,73,69,6E,67,21
FAHO 3030·DATA·FF,CD,ED,40,3E,0C
FAJL 3040·DATA·CD,5A,BB,21,00,A7
FAFH 3050·DATA·36,00,11,00,50,CD
FAGO 3060·DATA·9B,BC,CD,06,BB,C3
FAAN 3070·DATA·9F,41,CD,ED,40,3E
FAIL 3080·DATA·0C,CD,5A,BB,21,00
FALG 3090·DATA·A7,36,01,11,00,50
FACP 3100·DATA·CD,9B,BC,CD,06,BB
FAJM 3110·DATA·C3,9F,41,CD,ED,40
FAOM 3120·DATA·3A,6B,47,EE,FF,32
FAFP 3130·DATA·6B,47,FE,FF,CA,4F
FABJ 3140·DATA·47,21,46,47,CD,27
```



Typing listings

If you've never typed in a listing from *AA* before, then reading this following blurb is a REALLY GOOD IDEA.

- Basically, all you need to do is type in exactly what we print EXCEPT the first four letters in each line.
- The first four letters are a code which work in conjunction with our unique and utterly excellent *TypeChecker* program below.
- Only press RETURN when you get to the end of a command line. If a command line goes on to two lines do not press RETURN at the break in the line. Your lines on screen should break in exactly the same place as they do in the mag.

TypeChecker

This is a program that enables you to check whether you have typed *AA* listings in correctly. Type it in, then SAVE it for future use. So, when you want to type in an *AA* listing, and you want to double check that you got it right:

- Load up *TypeChecker*.
- Type NEW.
- Type in the listing of your choice.
- When you've finished type LIST.
- At the end of every line a highlighted code will appear. It should correspond with the code printed in front of the same line in *AA*. If it doesn't you have typed in that line incorrectly.

```
PAML 10·'·TypeChecker·V1.0·-·By·Simon·Forrest
     er·-·Dec·1992
MAOJ 20·'·For·Amstrad·Action·-·Public·Domain
DANK 30·MEMORY·&9FFF
CAJK 40·csum=0
GAME 50·FOR·addr=&A000·TO·&A05B
DAKJ 60·READ·byte$
GAJB 70·byte=VAL("&"+byte$)
FACF 80·POKE·addr,byte
GAFB 90·csum=csum+byte
DALK 100·NEXT·addr
OACI 110·IF·csum<>&2ADD·THEN·PRINT·"Checksum·
     Error":END
LAHE 115·POKE·&A001,PEEK·(&BB5B):POKE·&A002,P
     EEK·(&BB5C)
KAHI 120·POKE·&BB5A,&C3:POKE·&BB5B,&3:POKE·&B
     B5C,&A0
MACN 130·PRINT·"TypeChecker·V1.0·Installed":E
     ND
MABC 140·DATA·CF,FE,93,FE,0A,CA,00,A0,F5,C5,D
     5,E5,FE,0D,CA,22
LACJ 150·DATA·A0,5F,16,00,2A,5A,A0,19,22,5A,A
     0,E1,D1,C1,F1,C3
LAFJ 160·DATA·00,A0,3E,20,CD,00,A0,3E,18,CD,0
     0,A0,2A,5A,A0,7C
LADI 170·DATA·CD,45,A0,7D,CD,45,A0,3E,18,CD,0
     0,A0,21,00,00,22
LACN 180·DATA·5A,A0,C3,1B,A0,F5,E6,0F,C6,41,C
     D,00,A0,F1,E6,F0
KAJC 190·DATA·1F,1F,1F,1F,C6,41,CD,00,A0,C9,0
     0,00,END
```

Turning *TypeChecker* off (it is automatically initialised when you RUN the program above) and back on again is quite simple:

`POKE &BB5B,0` To turn it off
`POKE &BB5B,3` To turn it back on again

TypeChecker was an *Amstrad Action* presentation brought to you in association with Hairy Happening Productions Ltd.



```
FAKK 3150·DATA·40,06,19,CD,19,BD
FADN 3160·DATA·10,FB,CD,ED,40,C3
FAJJ 3170·DATA·A8,41,1C,02,1A,1A
FAAL 3180·DATA·1C,03,0D,0D,FF,21
FAAJ 3190·DATA·62,47,CD,27,40,06
FAFM 3200·DATA·19,CD,19,BD,10,FB
FAEM 3210·DATA·CD,ED,40,C3,A8,41
FACJ 3220·DATA·1C,02,0D,0D,1C,03
FACP 3230·DATA·06,06,FF,FF,CD,ED
FANI 3240·DATA·40,21,04,47,CD,27
FACK 3250·DATA·40,CD,06,BB,21,37
FAHL 3260·DATA·4A,CD,27,40,CD,06
FAJM 3270·DATA·BB,C3,9F,41,0C,0F
FACG 3280·DATA·02,20,20,20,54,68
FAGH 3290·DATA·69,73,20,70,61,63
FADI 3300·DATA·6B,61,67,65,20,77
FAGH 3310·DATA·61,73,20,77,72,69
FAHI 3320·DATA·74,74,65,6E,20,74
FAKK 3330·DATA·6F,20,66,69,6C,6C
FAFH 3340·DATA·20,74,68,65,20,67
FALH 3350·DATA·61,70,20,6F,66,20
FADI 3360·DATA·61,20,68,69,67,68
FAAI 3370·DATA·2D,63,61,70,61,63
FADI 3380·DATA·69,74,79,20,64,72
FAMH 3390·DATA·69,76,65,20,62,61
FAHH 3400·DATA·73,65,64,20,64,69
FALG 3410·DATA·73,63,20,62,61,63
FAGI 3420·DATA·6B,75,70,20,73,79
FAMK 3430·DATA·73,74,65,6D,2E,7E
FAKH 3440·DATA·0F,01,7E,20,20,20
FAKI 3450·DATA·54,6F,20,75,73,65
FACH 3460·DATA·20,74,68,65,20,70
FAAK 3470·DATA·72,6F,67,72,61,6D
FAGJ 3480·DATA·2C,20,79,6F,75,20
FACJ 3490·DATA·6D,75,73,74,20,69
FAEI 3500·DATA·6E,73,65,72,74,20
FAAI 3510·DATA·61,68,69,67,68,20
FAGH 3520·DATA·63,61,70,61,63,69
FABI 3530·DATA·74,79,20,64,69,73
FAOJ 3540·DATA·63,20,69,6E,74,6F
FAPH 3550·DATA·20,64,72,69,76,65
FAPI 3560·DATA·20,42,2C,20,79,6F
FAKG 3570·DATA·75,72,20,20,20,73
FAMI 3580·DATA·6F,75,72,63,65,20
FAEI 3590·DATA·64,69,73,63,20,69
FAGJ 3600·DATA·6E,74,6F,20,64,72
FADI 3610·DATA·69,76,65,20,41,2C
FAFI 3620·DATA·20,73,65,6C,65,63
FAFH 3630·DATA·74,20,74,68,65,20
FAKH 3640·DATA·20,20,20,73,74,6F
FAMH 3650·DATA·72,65,20,64,69,73
FAMI 3660·DATA·63,20,6F,70,74,69
FAAL 3670·DATA·6F,6E,2C,20,67,69
FAGH 3680·DATA·76,65,20,61,20,66
FAHL 3690·DATA·69,6C,65,6E,61,6D
FAOI 3700·DATA·65,2C,20,61,6E,64
FAKH 3710·DATA·20,77,61,74,63,68
FAMH 3720·DATA·20,69,74,20,77,68
FAML 3730·DATA·69,7A,7A,21,7E,7E
FABH 3740·DATA·20,20,20,54,6F,20
FAHI 3750·DATA·72,65,74,72,69,65
FADH 3760·DATA·76,65,20,61,20,64
FAAJ 3770·DATA·69,73,63,2C,20,79
FACK 3780·DATA·6F,75,20,6D,75,73
FAGI 3790·DATA·74,20,70,6C,61,63
FAOH 3800·DATA·65,20,20,20,79,6F
FAJI 3810·DATA·75,72,20,6C,69,62
```

Workshop

Okay, so there are no proper workshop boxes this month. This is partly because there isn't exactly much room, and also because the only bit we could possibly talk about is the first six lines of either program. Ah well, what the hell?

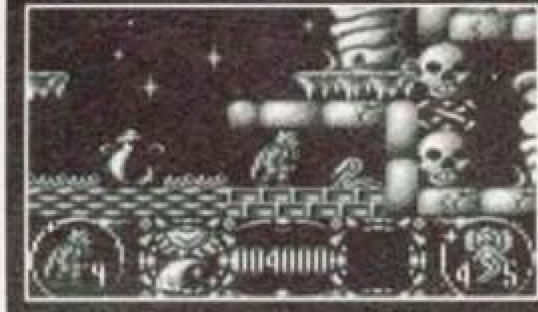
10 This line sets up the variable *addr* to the start address of the code.
20 Reads the first byte of data.
30 Checks to see if the byte is the 'end of data' indicator, and runs the program if it is.
40 What this line does is poke the address stored in *addr* with the byte.
50 Increases *addr* by one.
60 Loops back to line 20.

```
FAIH 3820·DATA·72,61,72,79,20,64
FACJ 3830·DATA·69,73,63,20,69,6E
FAAJ 3840·DATA·74,6F,20,64,72,69
FANH 3850·DATA·76,65,20,42,2C,20
FAKK 3860·DATA·61,20,6E,6F,72,6D
FAEJ 3870·DATA·61,6C,64,69,73,63
FAOJ 3880·DATA·20,69,6E,74,6F,20
FAGI 3890·DATA·64,72,69,76,65,20
FAKI 3900·DATA·41,2C,20,61,6E,64
FADH 3910·DATA·20,75,73,65,20,74
FAOH 3920·DATA·68,65,20,72,65,74
FACI 3930·DATA·72,69,65,76,65,20
FAKL 3940·DATA·6F,70,74,69,6F,6E
FAGI 3950·DATA·2E,20,49,66,20,74
FAGI 3960·DATA·68,65,20,64,69,73
FABJ 3970·DATA·63,20,62,65,69,6E
FABI 3980·DATA·67,20,72,65,74,72
FAJI 3990·DATA·69,65,76,65,64,20
FAFH 4000·DATA·69,73,20,61,64,69
FAMI 4010·DATA·66,66,65,72,65,6E
FAEJ 4020·DATA·74,20,66,6F,72,6D
FAKH 4030·DATA·61,74,20,74,6F,20
FAJH 4040·DATA·74,68,65,20,64,65
FAAJ 4050·DATA·73,74,69,6E,61,74
FABK 4060·DATA·69,6F,6E,20,64,69
FAKH 4070·DATA·73,63,74,68,65,20
FALI 4080·DATA·70,72,6F,67,72,61
FAOK 4090·DATA·6D,20,77,69,6C,6C
FAPI 4100·DATA·20,72,65,2D,66,6F
FAPI 4110·DATA·72,6D,61,74,20,6F
FACI 4120·DATA·6E,20,72,65,71,75
FAMK 4130·DATA·65,73,74,2E,7E,7E
FAGF 4140·DATA·20,20,20,41,73,20
FAMI 4150·DATA·66,6F,72,20,74,68
FAKJ 4160·DATA·65,20,6C,65,6E,67
FAPI 4170·DATA·74,68,73,20,6F,66
FAQI 4180·DATA·20,66,69,6C,65,73
FAKH 4190·DATA·2C,20,61,74,20,74
FABH 4200·DATA·68,65,20,20,76,65
FAIK 4210·DATA·72,79,20,6C,6F,6E
FAIH 4220·DATA·67,65,73,74,20,74
FAHI 4230·DATA·68,65,79,20,77,69
FAJI 4240·DATA·6C,6C,20,62,65,20
FAGI 4250·DATA·31,38,32,6B,2E,20
FAPH 4260·DATA·57,69,74,68,20,61
FALG 4270·DATA·20,20,62,69,74,20
FAMJ 4280·DATA·6F,66,20,6C,75,63
FAAK 4290·DATA·6B,20,74,68,6F,75
FAII 4300·DATA·67,68,2C,20,74,68
FAMI 4310·DATA·65,79,20,63,6F,75
FAJH 4320·DATA·6C,64,20,62,65,20
FALH 4330·DATA·71,75,69,74,65,20
FAOG 4340·DATA·61,20,62,69,74,20
FAFJ 4350·DATA·73,68,6F,72,74,65
FABH 4360·DATA·72,20,64,75,65,20
FABJ 4370·DATA·74,6F,20,74,68,65
FAEJ 4380·DATA·20,69,6E,62,75,69
FAKI 4390·DATA·6C,74,20,63,72,75
FAHJ 4400·DATA·6E,63,68,20,72,6F
FAFJ 4410·DATA·75,74,69,6E,65,73
FAAO 4420·DATA·2E,2E,2E,7E,FF,0C
FANG 4430·DATA·20,20,20,54,68,69
FAHI 4440·DATA·73,20,70,72,6F,67
FAII 4450·DATA·72,61,6D,20,69,73
FADJ 4460·DATA·20,63,6F,6D,70,61
FANI 4470·DATA·74,69,62,6C,65,20
FAIJ 4480·DATA·77,69,74,68,20,6D
FAHJ 4490·DATA·6F,73,74,20,68,69
FADH 4500·DATA·67,68,20,63,61,70
FAMH 4510·DATA·61,63,69,74,79,20
FADJ 4520·DATA·73,6F,66,74,77,61
FAEJ 4530·DATA·72,65,2C,20,74,6F
FAOI 4540·DATA·20,6E,61,6D,65,20
FAGI 4550·DATA·61,20,66,65,77,3A
FAMJ 4560·DATA·7E,0F,02,20,52,4F
FABJ 4570·DATA·4D,44,4F,53,20,52
FAAJ 4580·DATA·41,4D,44,4F,53,20
FAFJ 4590·DATA·52,4F,44,4F,53,20
FADI 4600·DATA·34,30,30,4B,2F,53
FAHH 4610·DATA·20,53,44,4F,53,20
FAPI 4620·DATA·4D,53,38,30,30,7E
FAJG 4630·DATA·0F,01,20,20,20,54
FAHJ 4640·DATA·68,6F,75,67,68,20
FAKJ 4650·DATA·69,66,20,79,6F,75
FAOI 4660·DATA·72,20,73,6F,66,74
FABI 4670·DATA·77,61,72,65,20,69
FAIJ 4680·DATA·73,20,6E,6F,74,20
```

Stormlord

A little while back, we promised to give you a tape-to-disk transfer routine for *Stormlord*. Well, here it is. Simply insert your *Stormlord* tape, a disk with 50K or so free, type in and run the following program, and follow the on-screen instructions:

```
DAOG 10·addr=&BE80
CAEE 20·READ·b$
HADN 30·IF·b$="**"THEN·CALL·&BE80:CALL·0
FAJO 40·POKE·addr,VAL("&"+b$)
EAEF 50·addr=addr+1
CABE 60·GOTO·20
FAHC 70·DATA·06,05,21,B1,BE,11
FAPD 80·DATA·40,00,CD,77,BC,21
FABG 90·DATA·40,00,CD,83,BC,CD
FAFG 100·DATA·7A,BC,06,05,21,B1
FAHH 110·DATA·BE,11,40,00,CD,8C
FAHD 120·DATA·BC,21,40,00,11,00
FAPF 130·DATA·A6,01,98,1A,3E,02
FACN 140·DATA·CD,98,BC,CD,8F,BC
FACH 150·DATA·C9,53,54,4F,52,4D
CAFE 160·DATA·**
```



Finally, you too can have a disk version of the Stormlord – The Editor's Cut.

```
FALL 4690·DATA·6F,6E,20,52,4F,4D
FABK 4700·DATA·79,6F,75,20,6D,75
FAJH 4710·DATA·73,74,20,73,65,74
FAEH 4720·DATA·20,69,74,20,75,70
FAAJ 4730·DATA·20,61,73,20,6E,6F
FACJ 4740·DATA·72,6D,61,6C,20,62
FAPI 4750·DATA·65,66,6F,72,65,20
FAGJ 4760·DATA·79,6F,75,20,72,75
FAHJ 4770·DATA·6E,20,74,68,69,73
FANI 4780·DATA·20,70,72,6F,67,72
FAML 4790·DATA·61,6D,2E,7E,7E,20
FAGH 4800·DATA·20,20,50,6C,65,61
FAGH 4810·DATA·73,65,20,73,74,61
FAFI 4820·DATA·6E,64,20,62,79,20
FAPJ 4830·DATA·66,6F,72,20,6F,74
FAKH 4840·DATA·68,65,72,20,70,72
FAHJ 4850·DATA·6F,64,75,63,74,73
FAMH 4860·DATA·20,62,79,53,61,66
FAEK 4870·DATA·65,53,6F,66,74,2C
FAIH 4880·DATA·20,61,73,20,77,65
FABJ 4890·DATA·20,70,6C,61,6E,20
FAJI 4900·DATA·74,6F,20,73,75,70
FAII 4910·DATA·70,6F,72,74,20,74
FADH 4920·DATA·68,65,20,43,50,43
FAKI 4930·DATA·73,66,6F,72,20,61
FAAL 4940·DATA·73,20,6C,6F,6E,67
FAGH 4950·DATA·20,61,73,20,69,73
FABJ 4960·DATA·20,70,6F,73,73,69
FAFM 4970·DATA·62,6C,65,2E,7E,7E
FALH 4980·DATA·20,20,20,4F,68,20
FADJ 4990·DATA·79,65,61,68,2C,20
FAIJ 5000·DATA·74,68,61,6E,6B,73
FAJH 5010·DATA·20,66,6F,72,20,62
FACJ 5020·DATA·75,79,69,6E,67,20
FAMG 5030·DATA·53,44,41,20,2D,20
FACI 5040·DATA·77,65,20,20,68,6F
FAAH 5050·DATA·70,65,20,69,74,20
FAHJ 5060·DATA·63,6F,6D,65,73,20
FAOJ 5070·DATA·69,6E,20,68,61,6E
FAGJ 5080·DATA·64,79,2C,20,61,6E
FAJH 5090·DATA·64,20,73,61,76,65
FACI 5100·DATA·73,20,79,6F,75,20
FAKG 5110·DATA·61,20,62,69,74,20
FAJL 5120·DATA·6F,66,20,6D,6F,6E
FAII 5130·DATA·65,79,2E,20,43,68
FAML 5140·DATA·65,65,72,73,FF,CD
FAIJ 5150·DATA·ED,40,C3,00,00,C1
DACJ 5160·DATA·00,00,**
```

READER ADS

For sale

Amstrad Action back issues, no.s 37, 40-62 in original binders with covertapes. These issues are no longer available so first come first served - £30 + p&p. Also 6 Amstrad Computer Users - £5. 0782 751015.

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Games for sale: disks and cassettes, send SSAE for list. Also Genius mouse and interface for £25. Write to Trevor Dennett-Thorpe, 6 Little John Avenue, Worsop, Mansfield, Notts. NG20 0GA.

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CPC 6128, colour monitor, printer, manual, mags, data, CPM disks, Brunword word processor, label printing, chess, games etc. VGC £200. Tel: 825647 (Abergele, N. Wales).

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Amstrad CPC6128, disk drive, colour monitor, 50+ games, Multiface 2", disk and tape games. Will sell separately if required. Tape player still. "With box + receipt £280.00. All excellent order. Write to Mr DG Brophy, 19 Hardwicke Road, Hastings, East Sussex. TN34 3PE.

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Amstrad magazines: AA (1-60), Amtix (all issues), ACU (1-45, most bound. Sell preferably as complete sets. Early issues of CWTA, ACE and NCE. For details: SSAE Julian Cater, 29 ST Leonards Road, London SW14 7LY, or phone 081 876 5245.

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WANTED

Wanted in good condition disk versions of German Master and French Mistress, must be a reasonable price. Also Multiface 2 wanted. Please contact Angie on 0822 832508 between the hours of 5pm and 9pm.

Public Domain contacts wanted to swap PD an CPC-464, cassette only please. Immediate response guaranteed. If you're interested in PD software then get in touch with Richard Latham, 31 Oriel House, Blackcat Close, Chelmsley Wood, B'ham. B37 5DG.

Pen pals wanted, any age, 6 to 80. Anyone who can help me understand the workings of the 464 and help understand programming and listing, and explain what they do. Nora Lees, 285 Franklin Road, Cotteridge, Birmingham. B30 1NH.

Wanted WWF for CPC 464. Willing to pay up to £7. If you can help ring Steve after 5pm on 0751 476990.

Bard's Tale and/or Gunship on disk for CPC6128 wanted. Write to NJ Shipp, 29 Carlton Drive, North Wootton, King's Lynn, Norfolk. PE30 3RD.

6128 Plus, small charity requires business software for donated computer. Small fee paid, 081 591 6209.

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Soft 968, Soft 971. The ins and outs of the Amstrad 6128. Good money paid. Please write to Eric Clark, 42 Atwell Cct, Kambah, ACT, Australia. 2902.

Wanted any software for a new PD library. Can be anything, send it to Robert Sparrow, 40 Dee Court, Hobbayne Road, London W7 3RQ. It can be tape or disk.

Penpals wanted! Mainly for programming routines and producing programs for AA. basic/machine code knowledge necessary. Or if you want to learn basic or need help in a routine, write to Ian Woods, 32 Singleton Road, Ellesmere Port, South Wirral, Cheshire. L65 7BG.

Cassettes of Pyromania, Roland on Ropes, Bombjack, Dizzy, also full solutions for Dizzy, Treasure Island, as completely baffled! Please state prices wanted. Also AA cheat for Pyromania infinite lives! Write to A Smithson, 19 Kirbys, East Terrace, Whitby, N Yorks. YO21 3HB.

Wanted Amstrad and other 8-bit software lists for research purposes only. Please include contact details. Write to Danny, 41 Rowlands Road, Yardley, B'ham. B26 1AT.

Wanted floppy disk drive for Amstrad CPC 464. Tel: 640502 Nottingham, any time.

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Music Blasters turn's your CPC into a musical keyboard (not public domain), home programmed. Send disk/tape and £2.00 to Simon Beckett, 206 Cherry Hinton Road, Cambridge. (6128 only) Guaranteed return.

Amstrad home programmed software for sale (not public domain). For a catalogue of software send SAE to DMP, 89 Wolverhampton Road, Codsall, Wolverhampton, WV8 1PL. (Prices from £1 to £3).

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Radical plans

PREVIEW FEATURE



Fluff and Lethal Moves might not be familiar names now, but give it a month or so and that could all change. If they turn out half as good as Radical Software reckon they will, they're going to be huge. Dave Golder talks to Radical's main man, Rob Buckley.

Has the ultimate CPC game been written? Some people don't think so, and they continue to write games that stretch the CPC to new limits. Rob Buckley of London-based Radical Software is one of them. Currently he's got two games set for imminent release; there's *Lethal Moves*, a *Street Fighter 2*-type beat-'em-up, and *Fluff*, a *Sonic*-style platformer. *SF2*? *Sonic*? This man must have big ideas. You'd better believe it.



So, Rob, who's involved on the writing side of *Lethal Move* and *Fluff*?

I will be writing most of the game code for both games, and doing some of the graphics as well. The infamous Richard Wildey of Sentinel Software fame will also be working on the graphics and Richard Fairhurst, *AA*'s own technical guru, will be writing the soundtrack.

How did the games evolve?

Radical has been looking into doing a fight game for some time now, and since everyone else was writing them on other machines it only seemed logical we should do the same with the CPC, especially since it appeared at that time that *Street Fighter 2* was not going to arrive.

With *Fluff* the idea came from my general interest in the Plus machines because after finishing *Smart Plus* people kept asking if we were doing any more Plus specific stuff and I said no. Then one day I was doodling on *Smart Plus* when I came up with the fluff character, and after doing a bit of animation with it I thought it looked pretty good, and knocked up some backgrounds. Ever since *Fluff* has been a Radical project.

What is the basic premise of *Fluff*? What does the player have to do?

Fluff is a standard platform game in the mould of *Zool* and *Sonic* which has been designed specifically for the Plus machine (sorry CPC'ers). The idea is that Fluff has to travel around collecting her children who have roamed all over various nasty and deadly zones. There are all the standard threats, goodies, baddies, moving platforms and what I think is a great amount of gameplay.

In *Lethal Move* what moves will you get?

All of the basic Guard, Jump, Punch and Kick moves will be there, but there won't be any Throws owing to the lack of a third Fire button on joysticks. Each character will have at least one special move as well, though with the programming system being used adding new moves is quite easy, meaning that each character will perform the standard kicks or punches differently depending on their style of fighting.



Voyage to the bottom of the sea

Rob actually has a third game in development, one which seems to have been in the pipeline longer than *Street Fighter 2*. It's a text adventure called *Undersea Adventure*, that is apparently growing to humungous proportions and will feature dozens of impressive graphics illustrating various sequences. So, Rob, how's this project coming along?

"*Undersea Adventure* is still not totally finished. This is mainly due to it being a personal project, and not having any budget. People keep asking me where it is, and all I can do is mumble. I promise that it will eventually see the light of day."

And when it does (can you guess what's coming next?) you can bet that *Amstrad Action* will have the first review.

Do you know yet how many different characters there will be in the final version of *Lethal Move*?

This is still up for discussion, but probably eight (or however many we have when the budget runs out). More than this and we'd have problems squeezing it all on a single disk, as the graphics for each character take up at least 16K. Character info, special move graphics, movement and collision tables take this up to around 25K for each character.

Do you think the game will fill the gap left by *Street Fighter 2*?

I think many people will be surprised when they see it, but don't expect Blanka to suddenly jump across the screen.

Hopefully lots of people will decide they'll buy this instead of *Street Fighter 2*, but *SF2* is a classic and virtually impossible to replace. I am sorry that US Gold decided not to bring out the game, but from the reports I've heard it's probably for the best. Trying to live up to an arcade and SNES giant in only 64K sounds like a failure from the start. With *Lethal Move* it was quickly realised that 128K and disk were the way to go from the start, and since it has no arcade or console parent nobody's going to say, "Where's this or that move?" which allows us to concentrate on what it can do well instead of attempting the impossible.

At what stage in production are both the games at the moment?

Programming-wise *Fluff* is virtually finished, apart from a few gameplay tweaks, and some specials. Level design and graphics should be done quite soon too. By the time this interview appears in *AA* *Fluff* will be available. *Lethal Move* is still in early



Kendo was rather surprised to find that he had been drawn against himself in the South Wimbledon Competitive Morris Dancing championships.





The frightening thing I that if Fluff was green she'd look exactly like Orville... aaarrrggghhh! Don't even think about it.

development, with only one character jumping and kicking his way around the screen. We are currently working on trying to make the computer fighters more intelligent, but are still waiting for the finished graphics without which it's difficult to do!

What special programming tricks do the games use? What's going to make the player go, 'Wow'?
Every game we release has to be graphically good or nobody will buy it, so therefore we put great efforts into the graphics. *Fluff*, for instance, uses the Plus extra hardware to the fuall with normally about 60 colours on screen at once, with pixel-perfect scrolling running at 50 frames a second. The look and speed at which everything moves really wouldn't seem out of place on a Megadrive or a SNES.

It's a bit early to say what programming tricks we might employ on *Lethal Move*, but they'll be in there somewhere. At the minute we have a lovely parallax scrolling effect, but if this slows the game down it will be dropped for the sake of the gameplay. When it comes down to it, it's gameplay which is the most important factor, otherwise people would be spending £15 on the latest french demo. Personally, I think demo writers should put their efforts into something more substantial rather than superficial demos. That way the CPC scene might be just that little bit healthier.

Any ideas about prices and release dates?
Fluff should be out now at £5.95 on tape, and £7.95 on disk (Plus machine only). *Lethal Move* should be finished before the end of February and will cost about £7.95 on disk.

What else has Radical Software got planned for the next few months or so?
Beers all round, but apart from that there's nothing concrete. I was maybe thinking of something involving polygons, but nobody else seems that enthusiastic so I don't know. Rest assured however Radical will continue to churn out stuff for as long as people want it.

Thanks, Rob, and good luck with the games. Both *Lethal Move* and *Fluff* will hopefully be reviewed next issue, so will they kick ass or fluff it? You know where to find out.

Being pink and fluffy is not easy. People keep ramming sticks up your bum and selling you to kids at fairs.



Somehow this manky tree has managed to bear fruit. Strange.



Oh no! Look out, Fluff. You're about to be attacked by a vicious pair of flying killer y-fronts, that are also a rather unpleasantly unwashed grey colour. Yeuch.



It was a shame that balancing on green twigs while avoiding killer bees and trying to reach stars wasn't an Olympic sport, otherwise Fluff might have found another vocation in life.

Essential info

Fluff

- Plus machines only
- Price: £5.95 tape/£7.95 disk
- Release date: Out now

Lethal Move

- 128K only
- Price: ££7.95
- Release date: Late February

Both games available from:

Radical Software
57 Lebrun Square
Kidbrooke
London SE3 9NS
☎ 081 856 8402.

Reaction

Send your letters to: Reaction, Amstrad Action, 30 Monmouth Street, Bath BA1 2BW

Dear AA — We like this man

I have just read the letter from Chris Hine of Australia. Who the hell does he think he is? This must be the rudest, most arrogant letter I have read in the magazine.



That was then and this is now. But which AA covertape offered the better deal? Lots of small programs or one big one?

How many decent full-length programs can you reliably get on a tape anyway? Give me quality over quantity any (well almost) day(s). Let's look at tape 22 – yes it had two games, one of which, *Tankbusters*, is a load of old poo. *Penguins* is very playable but not, let's face it, full-price, grab-it-off-the-shelves stuff. What else have we had? *Blues Brothers*, *Spindizzy*, *Dizzy*, *Stormlord*, *Sweevo's World*, *Heavy On The Magic*, *Firelord*, *Ranarama* – need I go on? (Please feel free – Dave.)

There have been 34 games on 33 covertapes (excluding PD) which at, say, £3 per game that gives £102 pounds worth of games and a professional mag for £2.95, and I haven't started on the utilities. My advice, tell him to bog off.

A 94-page magazine? Luvverly, but at what cost? Has he any idea how much advertising you would need to sell to produce 94 pages with, say, 50 per cent colour?

Two tapes 'chock-a-block' with games – does he think you buy games from Smith's and copy them 22,000 times? Does he not understand that copyrights need to be paid, that you (and ultimately us, the purchasers) have to pay for the programs? Probably not. Would anyone want to be his pen pal?

Well, that's let off a bit of steam about the oik. It might be of interest if you printed a short article about how much a colour page costs, how much a typical game costs to obtain, etc. Or then again, it might also show how much wholesalers and distributors add to the cost of the mag. Good news about the VAT though.

Give my appreciation to Simon for the Venture Forth series. Not for the program per-se but I am at last understanding string handling and what is meant by 'reading strings into variables'. Good stuff.

I am keeping my fingers crossed that issue 100 (and the brilliant *Elite*) will be

Dear AA — Who moved Christmas?

So who's got their Christmases mixed up then? You said in *AA99* that *AA100* would be on sale from Thursday 25th December. Now everybody knows that Christmas Day wasn't on a Thursday, so it should have been read 23rd December.
Gary Lewis, Co Durham.

Ah, now the trouble here, y'see, is that our publisher is so stingy he won't even buy us a new calendar. We're still using the same one we used in 1986. Normally whenever we need to print a date Simon works out what day it falls on. Unfortunately I did Next Month last month, and forgot all about things like leap years. Sorry about that. Anyway, it gives me the opportunity to get all schmultzy and say, "Well, *AA* is the best Christmas present you could ever have." (*Yeuch! – the rest of the crew*). **Dave**



Dear AA — Subscribers get more

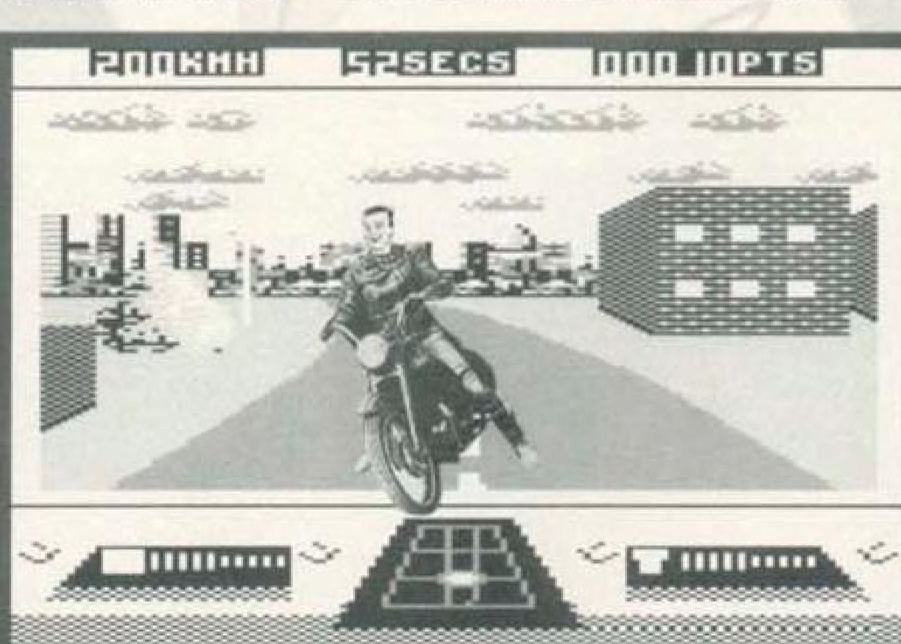
I always buy your mag if I see it, but now I order in advance. When I opened up my first ordered mag I was surprised to find a free sheet of paper with funny and interesting info – yes it was the Subs' Club. I read it through and on my fifth browse I found an interesting article called Hands Off My Mag. So I decided to write in.

I have some suggestions and ideas to improve your already fab magazine.

1 You could start a top 20 with a percentage out of 100, a line of descriptive info and the cost. I would find that very interesting.
2 You could include a fun page with jokes, crosswords (like angry) and wordsearches. Also maybe a few competitions and things.
3 You could start a computer game help page where people write in with problems when they can't get on to the next level.
4 You could invent your own computer game in which you could have a choice of players – Dave, Andy and Simon – and you have to try and find pages of your mag. The first one to make up a full magazine is the winner (good idea isn't it?).

Those are all my ideas. Now I have to tell you what I like and dislike. Well, my favourite part in your mag is the cheats page, but I think you should have more cheats each month. But what I detest is you advertising Amigas and Ataris, etc. I mean, if you make people buy other computers they may not buy your mag again and sell their Amstrads.

Well, now I have to go, but before I do, I just want to say that I hope you continue to make your mag as good as always and that you mention my name in your next edition. Thank you, yours computingly,
James Anderson (13), Glasgow.
PS Tell Simon he needs his hair cut.



First there was Space Invaders. Then there was Phoenix. Then there was Street Fighter 2 (okay we leapt a few years there, but space is limited). But are you ready for THE NEXT BIG THING? Yep, coming to a CPC near you as soon as someone writes it, The Andy O Bike Simulator.

out before Christmas – it does tend to make typing difficult, though.
David Percival, Birmingham.

This is a genuine letter, and, no, David isn't a friend or relation. Just a very sane, reasonable, level-headed, rather wonderful human being. You're obviously a very intelligent person, David (...and the cheque's in the post). **Dave**

Viz a viz

I have bought a couple of AAs and have some questions:
1 Do you find out if all the Mail Order companies are safe before you advertise them in the mag?
2 What size disk is *Stop Press*, and most disk software, supplied on? What disk drive would you recommend and will I need an interface for it?
3 My light pen (from DK'tronics) won't work. What do I do?
4 I want to start my own fanzine (a *Viz* rip-off) and I want a printer with a few shades and a few fonts at a low price. What printer do you think I need?
5 With a 64K memory expansion do I get all the commands of a 6128?
6 Are *Sim City* and *North and South* available in 128K only?



North and South, a classic across formats.

7 Could you tell me a good version of the ancient bat and (square ball) tennis game?
Spanner Bobblehat, Leicester
PS Nice magazine
PPS Please print in *AA99* that I'm getting some CPC stuff for Christmas.

1 We do check them out as far as possible but we also rely on our readers to tell us if they are having any problems. If you have a complaint about one of our advertisers write in to Alison Winter, *AA* Advertising Complaints, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW. But you should be safe contacting any of the companies advertising in *AA*. But, just in case, I would advise everyone ordering goods by Mail Order to check out our new Buyers' Guide in Amscene (page nine).
2 *Stop Press* is available on 3-inch disk only as is most CPC disk software. If you read our top 100 last month, you'll know the answer to the second part of that question (yep, it's another plug for Back Issues).
3 Throw it away.
4 The Star LC20 available from Ultra Software, Fulling Mill, Broughton, Banbury, Oxon OX15 6AP.
5 No. You don't have the BASIC commands GRAPHICS PEN, GRAPHICS INK, COPY CHR$ and a couple of others (in other words Simon ran out of the office before telling me the whole list).
6 Nope, 464 owners aren't denied access to these two excellent games.
7 There's a Binatone Home Entertainment System (circa 1980) going second hand for a fiver in a junk shop just down the road from the *AA* offices in Wells; it includes tennis, football, squash and a couple of shooting games (using an early version of the Light Gun). If that's been snapped up you could always try a few PD libraries (check out Amscene Directory on page nine). **Dave**

1 Ah, but who would compile it? Should it be a regular item or a one-off? Should it concentrate on games or serious stuff? Or both? Personally, I reckon we could fill the magazine quite happily with Top 20s but I think our Top 100 last month just about covered everything in that respect.
2 Well, Clur often hands me copy that looks like a wordsearch, but a quick run-through with a spellchecker solves that. Anybody else interested in a puzzle page? Or does trying to work out what Simon's whittering on about in Assembly Line count? What the heck? Check out this month's Next Month page.
3 Actually, expanding the Cheat Mode pages is something we're considering. Perhaps a page where readers answer other reader's problems is one way to approach this. Again, write in and tell me what you think.
4 That sounds brilliant (well, with a bunch of egotists like us, were we going to say anything other than that?). I'll get Simon on to it right away. **Dave**

Game cassette and match

I am writing in response to the letter On Your Marks, Cassette, Go that was printed in *AA99*.

I would like to commend Richard Duggan who does a wonderful job of supplying cassette-based PD software to his many customers and I congratulate him on a service that's very well organised and also very helpful indeed to the majority of UAUG members.

If you have any problems with any PD related issues, then Richard Duggan is only too glad to help out as I have discovered from time to time.

Also, if any disk-based PD libraries out there are interested then I am perfectly willing to pay twice the price that they charge for disk-based PD if they are willing to transfer their disk-based PD software on to cassette for me.

This way the disk-based PD libraries will be compensated partly for the extra time involved in transferring disk PD to cassette and I get the software in the format I need.

If any of your readers who run disk-based PD libraries are interested then please send me your PD catalogues so I can order PD software from the different PD libraries.
Richard Latham, 31 Oriel House, Blackcat Close, Chelmsley Wood, Birmingham, West Midlands B37 5DG.

There certainly seems to be a huge demand for tape-based public domain software. All entrepreneurs take note. **Dave**

Code breaking

I am a proud owner of an Amstrad CPC464 and I buy your excellent mag every month. I was wondering if I could ask you some questions:
1 Do you know if there are any musical packages that will run the tablature out of guitar books because I know someone with an Amiga who claims that he owns such a package for his computer?



Are you ready for the CPC version of Stairway to Heaven? Will anyone ever be?

2 Where can I get some decent demos, such as *Facehugger*?
3 I am thinking of getting into Machine Code programming seriously. I have upgraded my CPC to 128K and own a disk drive. I have also got a package called ADAM (which came from Audiogenic Software). Is this very powerful compared with MAXAM or any other leading Assembler?
4 Where can I get some decent info on coding and demos?
5 I want to start my own fanzine, but I was thinking of taking it a stage further and getting a job in your excellent magazine (or any other good mag). How would I do this? I am good at drawing and wouldn't mind a job in art, or maybe something else like reviews. Are there any jobs going?

A big pat on the back for three million plus copies of sorted *Amstrad Action*.
Jason Lifton, Nailsea.

1 No, but Simon would be happy to convert *BooTracker*. If enough people write in saying they'd want it, we'll stick it on the covertape.
2 Pick pretty much any PD library (see page Amscene Directory on page nine).
3 Ah, sorry to have to break it to you, but ADAM isn't one of the better utilities around.
4 *Amstrad Action*, what else?

5 There aren't any jobs going on *AA* at the moment, but the writers that have worked for the magazine have all got into journalism in different ways. There's no set route into the job – some of us have been trained journalists, some have come from university and others came straight from the CPC fan scene. About the only thing we've all had in common is a love a computers and decent writing skills. So concentrate on your writing skills (but just a word of warning – there is a world of difference between a good English essay and a good piece of magazine writing; if you can't work out what it is then perhaps another career might be a better option). **Dave**

Dear AA: Power to the people

Quite some time ago I wrote to Presto PD in the hope of obtaining the *PowerPage 128* program for which I waited with baited breath only to find that he cannot supply it.

1 As Robot is not operational at the moment may I make a suggestion? Why not save yourself some money on buying the rights to put utilities on your covertape and put on good quality PD on instead – *PowerPage 128* springs to mind.

At least I would be able to get a copy of it then and so would all the other patient people out there. I realise that Richard Fairhurst is a very busy man and I apologise if I appear impatient, but I have a use for a good quality DTP program and from all the write-ups this appears to be the one for me.

2 Could you please print a list of contents of back issues as without it we do not know which ones to order?

3 Lastly, when I subscribed to *AA* I did not require the Hackers' Guide and you sent me a credit note for a free gift of my choosing. Since then you have not had any free gifts on offer. Could I please redeem this against some Back Issues or even a copy of (you guessed it) *PowerPage 128*?

JA Wareham, Dorset.

1 Although Robot has closed down you can still order a non-PD version of *PowerPage* from Richard Fairhurst direct. Contact him at 2 Trent Road, Oakham, Rutland, LE15 6HF. And the reason we don't have much PD on the covertape is because it seems slightly odd to give away software that theoretically, should be available free anyway. We like to give you something worth a bit more.

2 Check out our new-look Back Issues service on page 24. Does that suffice?

3 Anyone who has *AA* credit notes can use them against *AA* subscriptions or back issues, but not, I'm afraid, *PowerPage 128*. I mean, come on, we just write about and advertise the stuff, not sell it. **Dave**

Dear AA: Boo to you too

I've been reading *Amstrad Action* for a couple of years now and have always been dead chuffed with the covertape and content of the mag. Right, I'll get to the point. I have some questions.

1 I love *BooTracker* to bits, but I need to know how to get my tunes running alongside another program, eg, I want to have a picture of a pig and have a compiled tune of *Mud, Mud Glorious Mud* going along with it. I need to know how to load the art and the music into memory (I use *GPaint* and *Bootracker*).



Sing along to Mud, Mud Glorious Mud while looking at this picture and you'll have some idea of what Donnison Laing's aim in life is.

2 How do you make a bass drum sound using *BooTracker*.

3 Erm... is *Soundtracker* out on cassette for the CPC 464?

4 Which is the best Metallica album?

5 Why is *Street Fighter 2* coming out on budget? Do the programmers feel too ashamed to put it out at £10.99?

6 Can you please print the full Venture Forth listing?

Donnison Laing, Maidstone.

1 Thank you. The instructions for getting tunes to run outside the package were in the ish, but just for you:

Nip along to the filing menu and select COMPILE. After giving a filename, the machine will pause for a few seconds, then save out a file to disk. This file will have a `.MUS` extension as opposed to `.BOO`, so there's no danger of accidentally getting it mixed up with your normal music files. Anyway, these files can now be loaded into your own programs by using the following few lines of BASIC:

```
MEMORY &7FFF
LOAD "filename.MUS",&8000
CALL &9A90
```

This will load up your tune and start it

Dear AA: Storm warning

The *AA99* covertape proved to be a bit of an initiative test. I have to confess – I failed it. I am one of the people who 'want it on disk'. Following the instructions given on page five of the issue I ended up with the *Font Editor* safely in place on my disk.

That was all.

After some fiddling with the 'clip art' file I managed to eventually get the two sheets of clip art on to disk.

Then I turned to side B of the covertape. I was in search of the loading intro which would enable me to save *Stormlord* to disk. It wasn't anywhere to be found.

I intend playing *Stormlord* quite a lot. Please include the missing loader on next month's covertape (along with grab converter) or put it in the issue as a type-in.

This would lower my anxiety level.

Colin Lougher, Birmingham.

There should have been a loader for *Stormlord* on the tape, or at least there was when we sent it off to the duplicators.

Anyway, to make amends we have included the loader on this month's covertape. **Dave**

Storm Warning 2

I am fuming at you *AA*. Why in the world did you remove a part of the *Stormlord* game? I know you said something about ethics – that's rubbish. Kids now see a lot more than the thing you censored. Even when you first reviewed *Stormlord* you showed the bit you censored. And you listen to your readers, do you? Ha ha. That's a joke. Remember, if in future you're going to censor a game again don't put The Complete Game as it's not the complete game, is it? What about us older CPC users? Can we get the game intact because when you censor a game it spoils the gameplay as every part of the game makes the game.

JR Hoggan, Somewhere.



Stormlord caused quite a storm itself. Not only did the disk loader vanish, but so did various parts of the women's anatomy.

Er, are you really sure that the tiny bit of censoring we did marred your enjoyment of the game that much? Are you sure you're reading the right magazine? Perhaps one off a higher shelf might be more suitable?

Seriously, I would argue that it didn't affect the gameplay at all. We're always saying that gameplay is more important than graphics and this was purely a graphical alteration. And yes, kids can see things like that all over the place, but there are still some people who get offended – if not the kids then their parents. So in deference to them we made a slight alteration which IN NO WAY affected the gameplay. **Dave**

playing. To stop it, you need to issue the following command:

```
CALL &9A93
```

One important thing to note is that tunes will only fit into memory if all ROMs are switched off. For those of you who are panicked by this, really, the only reason is that if HIMEM is below &A000, the tune code will be damaged.

2 An easy one, this. As I remember, you'll be wanting to use instrument A from the quickstart instrument file – set it to a very low E and you should get some sort of bass drum type sound.

3 Unfortunately, no – it relies on the disk drive quite a lot.

4 *Kill 'Em All*, before they discovered the hideous radio friendliness that you can find on all the later stuff. Failing that, *Garage Days $5.98*.

5 Why the hell are you complaining? Do you go into shops and try to beat the price up? Seriously though, US Gold didn't seem to think the CPC market could support a full price release, and I think they were right. It's just a pity it's not coming out at all now, isn't it?

5 It might be just me, but I thought we did. I'll try to get Dave to print the full character interaction stuff as soon as I get around to writing it. **Simon**

Dear AA Sudden impact

1 Why don't you have any RPGs on the covertape? Put *Times Of Lore* on one soon.

2 Do *Soundtrakker* files play normally when the disk drive is being used?

3 I have stacks of corrupt disks. Is there a program which can repair them?

4 Do you know what the password is to part two of *Army Moves*?

5 Can you print my address?

6 How many egg whisks can I buy for £5?

I edit a diskzine called *Impact*. If anyone wants a copy send 50p, a disk and an SSAE to the address below.

Tom Dean, 53 High Lane, Burslem, Stoke-On-Trent, Staffordshire ST6 7DF

1 When the series of Cecco games finishes its run, who knows what we might put on the covertape? (We certainly don't.) Anyone else want to see a top-notch RPG on a future tape?

2 Simon doesn't think so, though he's been proven wrong before.

3 'Fraid not. Reformatting is your best bet.

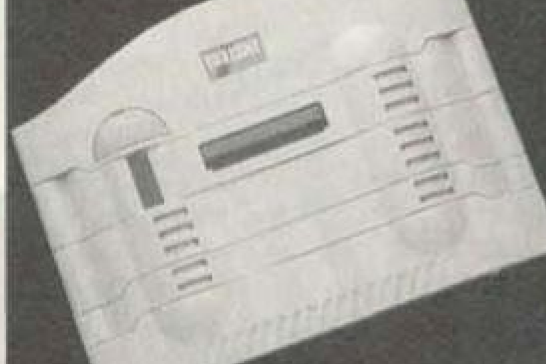
4 Ah, now that would be telling (actually I don't know and our Cheat guru Lee just said, "I gave you a POKE in last month's Cheat Mode – what more do want? Blood?").

5 Yes, but don't blame us if you suddenly get tons of junk mail pouring through your letter box, okay?

6 That really depends on how much you want to spend on each one.

Oh yeah, and by the way, there's a review of *Impact* on page 54 of this very issue, so check it out before you check it out (if you see what I mean). **Dave**

Dear AA That GX project



We thought it would be well worth taking some time out to explain the situation over this 'connecting a CPC to a GX4000' debate. We reckon there has been a bit of a misunderstanding:

In the original article, Richard Fairhurst stated that there was definitely a way to link a CPC and a GX4000 together and come up with a CPC Plus. Sure, fine, hunky dory, this is true enough. Pretty pointless, but true enough.

However we've been receiving letters asking about a hardware project that allows you to add a tape deck to the GX4000. This is utterly impossible. Okay we admit you can link a CPC (which has a tape deck) to a GX, but any tapes you play on the CPC's tape deck will only be using the CPC to get things up and running – you might as well have a toaster connected to it. The point is this – the GX DOES NOT CONTAIN ANY BITS FOR ADDING A TAPE PORT, A DISK DRIVE, A KEYBOARD OR ANYTHING ELSE. Okay? Simon

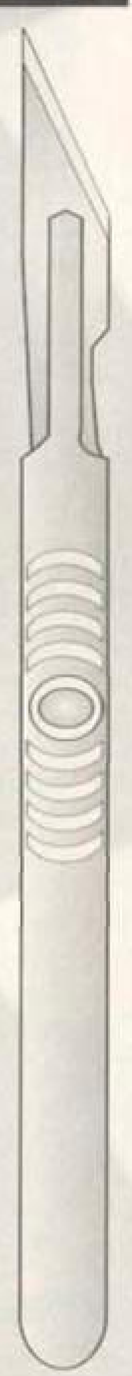
Dear AA Brunder-estimated

The DTP feature (*AA99*) was very useful but please don't run down word processors like *BrunWord* and the cut and paste method of production for magazines. I use this method monthly to produce my community/church magazine (circulation 600) and it is most satisfactory. Also, I am a Governor at the local school and used this method to create our magazine-type Annual Report To Parents. It was then entered in the *Times Educational Supplement* national competition for such reports and ended their two-year search for an outright winner.

Some at *AA* in the past have criticised *BrunWord Elite Mk2 ROM* as being expensive. This I would not agree with when the user takes into account the facilities, but now on special offer and reduced to half price (£69) it's got to be the bargain of the decade.

As for *Stop Press*, the article failed to mention it unfortunately only works properly on 9-pin dot matrix printers and although it's a lot of fun it's incredibly slow compared with *BrunWord* to print out.

Rev Allan Ricketts, Ross on Wye.



First off, yes *BrunWord* is an impressive program, but I don't remember *AA* running it down in the DTP article. The reason it wasn't mentioned was because it's a word processor and the feature was about DTP. Yes, you can get some marvellous results with the cut and paste – magazines in general survived with this method for over a century – but if you master a decent DTP system you can get even better results. Personally I think a combination of the two approaches is the best method for fanzines. **Dave**

Dear AA Violent reaction

You asked for people to write in and have a rant and that was just the opportunity that I've been waiting for to vent my spleen on a subject that has been infuriating me.

While we are blaming the big softies for pulling out of the CPC market and the pirates for killing off the CPC scene I think there is another group within the scene itself which is doing that very nicely themselves – so-called independent CPC companies who couldn't give two hoots about their customers.

I have lost count of the times I have sent away for products and had to wait weeks or months for any reply – and then it's usually to say that the product has been withdrawn, is no longer being sold or whatever. Even worse is when you send your CPC away for a repair or update and they take your money, then you don't see your computer again for months. Often when you ring up to inquire about what's happening you either get rude replies or number unobtainable (which is ominous).

If this is the way that companies who boast that they are continuing to support the CPC act, then what hope is there? They obviously have a complete contempt for their customers, and are actively turning people away from the scene.

There are plenty of reliable companies still dealing with CPC products (Wave, Wizard, SD Microsystems and Microform to name a few) but there are too many people who are just not running their businesses professionally. Unless they start soon, they might find they have no businesses at all.

PDJ Dennis, Reading.

Harsh words there. But yes, I agree that companies do need to be professional even in a small market like ours. Would any companies like to reply? **Dave**

And a happy New Year

Thanks to all the people who sent us Christmas cards by the way (except the ones that said I look like Father Christmas). Dave

The Good, the Bad and the Ugly of *Platformers*

Which platformers deserve medals and which deserve to be outlawed? Clur checks out what makes a classic platformer while deputy Forrester roots out the lame games.

What makes a game good? Or bad? Or, for that matter, downright ugly and unplayable? There's the old school of gamesplayers – you know, the sort who still prefer to use the keyboard to a joystick – who'll tell you that gameplay is everything and the graphics can look like something knocked up on a Sony pocket calculator for all they care. Well, fair enough, but that doesn't mean that all games *have* to look more primitive than cave paintings.

No, a decent game is the result of a combination of elements that work together like a well-oiled machine to produce a satisfying whole. Not that every game should fulfil every criterion like somebody's standing there with a tick sheet. But if they fail to make the grade on too many counts then they're not likely to be much cop, are they?

So even though, as they say in hideous American sit-coms (shortly before the entire cast indulges in a 'group hug'), everybody is an individual and we all have our own personal tastes, you can to an extent break down a game into individual elements to see how well it holds up. That's what we do in a sense at the end of our reviews when we give scores for graphics, sonics, grab factor and staying power. But games are more multi-faceted than that. So what this new series, *The Good, the Bad and the Ugly*, is all about is taking a closer look at a different genre of games each month and breaking the games down into their constituent elements, and finding out which games do what bits well, and which games don't.

And to kick off, let's take a butcher's at platformers. It doesn't matter what shape or size they are – as long as they've got platforms in 'em we've had a look at them. Of course, there are many more around than we've mentioned here, but these are the ones that really stood out.

Graphics

Graphically, platformers tend to be on the garish side – bright and colourful is what the programmers call it. We haven't seen the full game of *Fluff* yet, but by the looks of the screen shots it's going to be one of the brightest and most colourful games yet on the CPC. In fact it's the complete opposite of *Bionic Commando*, the dullest, least exciting-looking game I've ever seen. The game actually came in two versions, colour and monochrome, but the colour version looked like the monochrome version viewed through one of those cheapo plastic screen covers or a pair of 3D-glasses.



When the intro screen looks this bad you don't hold out too much hope for the in-game graphics.

Compare it with the stunning parallax scrolling of the amazingly colourful backgrounds of *Prehistoric 2*, or (if you want a more contemporary example) the dead lush *Nebulous* and you'll be amazed that something as ugly as *Bionic Commando* ever got released.

Of course, the graphics of a game don't really make much difference to the actual gameplay, but would anyone argue that earlier platformers like *Chuckie Egg* and *Jet Set Willy* wouldn't be enhanced with the addition of gorgeous backgrounds like the ones in *Super Cauldron*? It would be churlish.

THE GOOD

Prehistorik 2

Graphics 10/10
I can't imagine that you'll get anything much better than this for picture quality.

Sound 8/10
Not great but good enough.

Animation 9/10
Even the nasties have been decently animated.

Scrolling 10/10
I never really thought that I'd see such smooth parallax scrolling on the CPC.

Plot 7/10
Cavemen are fascinating little creatures.

Collision Detection 9/10
Not as good as our Ricky D's but near as damn it.

Puzzles 0/10
There aren't really any puzzle elements at all to the game – ah well you can't have everything.

Control 9/10
He does what you tell him, when you tell him and how you tell him (*I wish I could find a man like that – Clur*).

Difficulty 10/10
I don't mean it's really difficult, I mean that the difficulty level's set on the right curve for most games players.



You don't get graphics as good as *Super Cauldron's* every day... er, unless you play it every day, I suppose.

Sprites

Prehistorik 2 scores on two accounts – it not only has some of the best backgrounds graphics on the CPC, but the main sprite is one of the best characters, too. He's just the right size for his environment and isn't too complicated – you can see which leg's going where without getting confused by the intricate weave on his trousers.



Compare and contrast: the sprites in *Prehistorik* (above) and *Count Duckula 2* (below)...

Seeing great sprites like the ones in *P2* really makes you wonder what the designer of the *Dizzy* character was doing when he first scrawled the oval that is that desperately sad egg. To really enjoy a game you have to get involved, so involved, in fact, that you actually start feeling for the character you're controlling. How anyone can have any form of empathy for such a characterless character is beyond me – *Dizzy* is duller than any Prime Minister.

Okay, that's the *Dizzy*-bashing section over. If you thought that everybody's 'favourite' egg was



Actually, it's a bit of an unfair comparison. You can't even work out what's actually the sprite in CD2.

insultingly bad, you really ought to take a look at some of the worst sprites in history...

Three little words; *Count, Duckula* and *Two*. As well as being probably the worst game in living history, it has probably the most abysmal monochrome (with that chrome being black), badly drawn, unappealing and indistinguishable (from the rest of the characters) characters in known existence and quite a way beyond that.

Animation

Beautiful backgrounds don't matter a jot if the characters move as if they've got a bee hive in their underwear. *Popeye* is a perfect example of the game that looks great in static screen shots but loses any credit it had when you witness the huge sprites moving so jerkily they look like arthritic crane flies.



Not a very good little mover is *Popeye*. We've seen boats in gale force conditions move more smoothly.

Fortunately there is a saviour to bring us back from the land of the jerkies and his name is *Prince of Persia* – if only we could have someone as graceful as *Prince P* in our synchronised swimming team, England would be world champions.

It's *CD2*-bashing time again, and a small plea to programmers around the world; programmers, when you want to animate something, please, please don't just erase it from its starting position and make it re-materialise where it was supposed to finish. Move it.



Such grace, such poise. I bet *Prince of Persia* could finish the game with books balanced on his head.

Power-ups

The main problem which any programmer of a platformer faces is estimating the boredom threshold of a potential user. If you have to do the same thing over and over again you're probably not having a much fun. One way platformers get round the boredom factor is by intermittently altering the main character's abilities. Most platformers achieve this by offering bonus pick-ups and power-ups – like in *Bubble Bobble*, where the normal bubbles are replaced by lightning bubbles and the gameplay changes drastically.

THE BAD

Count Duckula 2

Graphics 1/10
Who ever heard of transparent ducks?

Sound 2/10
I heard very little of what could legally be called music.

Animation 1/10
Makes *Captain Pugwash* look like *Aladdin*.

Scrolling 0/10
There's plenty of time to make a cup of tea between screens.

Plot 5/10
Well, when you read the plot it sounds like there's some hope for the game.

Collision Detection -5/10
So this is what they mean by walking on air.

Puzzles 0/10
The main one is how it got released.

Control 2/10
Duckie sure doesn't want to do what he's told.

Difficulty 2/10
It's hard to do well when you can't be bothered to try.

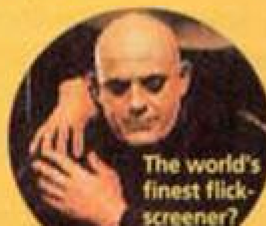


***New Zealand Story* proves the potential potency of power-ups and pick-ups with its hovering platforms.**

And don't forget the hovering things you nick off the teddy bears in *New Zealand Story* – the game changes from an ordinary bounce around the place platformer to a float-around-and-kill-things-before-they-kill-you romp. Problems only start to come in when the pick-ups are just in there because the programmer thought the game ought to have them.

Getting around

If a game has only one screen per level, you'd assume that it would be easier to program and therefore a lot more processor time would be spent on the game play – just look at *Bubble Bobble* and *Rodland* to see how it should be done. But scrollers have got it tough; not only have they got to cope with moving sprites, but every time the player's sprite moves, even if it's just a pixel to the left, the Amstrad has to calculate what it should be showing on screen. It may be tough to do but that's really no excuse for sloppy work.



The world's finest flick-screener?

Thankfully there's a fantastic example of the scrolling game to fall back on in *Prehistoric 2*. The scrolling is smoother than the cream in a Twinkie. Why can't we have more games like this? The world would be a much better place for it.

A happy medium between the two is the flick-screen platformer. Well usually it is. There is one game universally renowned for its appallingly slow screen updates – yep, I'm talking about the loathed *Count Duckula* yet again. Luckily the *Addams Family* game makes up for that disaster with the most stonkingly fun flip-screen action ever. Each screen has its own particular puzzle to solve but they all link up really well – a stonker of a game if I ever played one.

But how does all this affect your game? Well, if a game is flick screen, it should be more than just a different way of scrolling – in *Jet Set Willy*, for example, each room had a name, whereas *Manic Miner* used each flick screen as a separate level. Most programmers choose between flick screen or continuously scrolling games as a point of style, one which can have dramatic effects on the gameplay. Some programmers, unfortunately, don't.

Dramatic licence?

Count Duckula is the perfect example of the recipe for disaster when it comes to licensed games. Because software houses assume that the games are going to sell because of the name and because they've spent all their money securing the licence in the first place, licences tend to be appallingly written. Of course there's always an exception to the rule and this time it's called *Batman the Movie*. It was hyped beyond all belief and we all expected it to be just another duff licence. We were wrong – it's one of the greatest we have ever seen.

Another example of excellent licence action is *Hudson Hawk*. Great care was taken to make sure you play only the most enjoyable parts of the film, throwing any plot points that get in the way clean out of the window.

Probably the worst licence... *Count Duckula 2*... I think we can guess the rest.



When I said get a *Batman The Movie* picture, Andy, I did mean the 90s version, not the 60s one.

Plots

Apart from licences, where programmers have to try to keep to the style and plot of the original, whether it be a movie, a book or a TV program, platformers generally tend to have the most ridiculous plots. You might think that the plot isn't important, it's the gameplay that counts. Fair enough, but think about *Bubble Bobble* which is undoubtedly a great game; the plot, however, is so sickeningly cute, that you're likely to bring your lunch back up. I reckon that all that nonsense about yukky kids being turned into cute dragons is likely to be a real turn-off for loads of people. *Rodland* is similarly afflicted.

The guys who did *Switchblade*, on the other hand, are masters of the scenario scene. The fact



Besides being pretty darned brilliant all-round, *Switchblade* also has a great little plot.

that you're searching for seven sections of a sword gives the game a sense of purpose and progression.

Collision detection

I'm sorry but it's time to mention the horror of horrors *Count Duckula 2* again. I tried desperately to find another example of how poor collision detection can ruin a game but couldn't *(try DJ Puff – Dave)*. I know ducks are supposed to be able to fly but this is ridiculous – *CD* finds it particularly easy, no flapping or anything, to balance with one toenail on the edge of a platform.

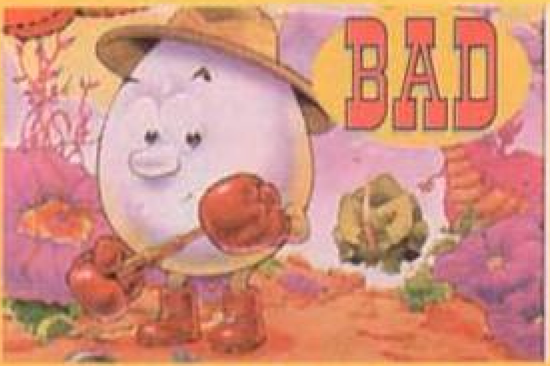
Rick Dangerous (both versions), on the other hand, has amazing collision detection, almost pixel-perfect in fact. This means that you have solve some of the puzzles with pin-point accuracy; getting the bat to fly away by prodding it with a stick in the first section of the original game is a great example. If he stands too far away he waves his arms about pathetically. One step too near and he's dead.



Precision is the name of the game, here *(actually* Rick Dangerous 2 *is the name of this game – Dave)*.

Puzzles

Working out puzzles is a major part of playing a lot of the platform games. Timing puzzles are the most popular while there are a lot that consist of picking up an object from somewhere and using it or dropping it elsewhere. The Codies tried and succeeded to sell loads of this sort of game in the guise of that darned egg, *Dizzy*. They seemed okay at first, but soon the writers became strapped for ideas for puzzles, so the problems became gradually more surreal; in the early games you would put out a fire by pouring water over it – logical enough – whereas in later games you'd more likely need to find an elephant and an ear trumpet to do the same job (you can try and figure out how, we could never be bothered).



Okay, no jokes about bad eggs. The puzzles in Dizzy games can scramble your brains *(you're fired – Ed)*.

THE UGLY

Besides *Count Duckula 2*, the prizes for the most worst-looking platformers ever go to *Quartet* (take a bow Hit Squad) and Romantic Robot's *Never Mind The Nasties*, both of which should carry government health warnings. They were deemed so appalling that we elected not to print any grabs owing to possible medical repercussion (actually, to tell the truth, we've burnt our copies of both).

When a game's that strange how the hell are you supposed to work out what you're supposed to be doing? It becomes more of a case of trying out everything in your inventory every time you come up against a new problem and hoping that you stumble on something that works; not what I'd call an awful lot of fun. Take a quick peek at *Nebulus* and you'll see how it should be done; a perfect difficulty curve mingled with some fantastically complex puzzles – fantastic stuff.

Weapons

Count Duckula! Ha, scared you didn't I? Bet you thought I was going to say something nice didn't you? Well I'm going to slag it off yet again 'cos I've just been reminded of the pathetic gun that the duck uses to scare off its enemies (unfortunately, we had to play the game again for research purposes). What you need is a weapon like the one in *Rodland* – thwacking those chutes fluffy things from side-to-side is so satisfying. It's a great game to play on a Monday morning when you've just been fighting your way through the traffic trying to get to work on time. The trick is to be creative – why does it have to be a gun that you use to do the nasties in with?

There is another category of game that deserves a mention – the 'meathead with a mission'. You see, there's been a huge tendency with licences to take a meathead, put him in a platforming world and name the game after the film he came from. Weaponry goes out of the window, hitting people comes back in, and it's nearly always rubbish. Sorry.

Control systems

One thing you definitely don't want in a platform game is a bad control system. If you can't convey to your character what you want him to do then you're likely do be dead within two screens of the start. Top of the charts in the totally uncontrollable stakes is any *Dizzy* platformer. You spend most of your time getting him to the right pace on the screen by jumping back and forth all over the place, rather than dealing with the crux of the gameplay, solving the puzzles. Why can't *Dizzy* be more like *Rick*? Now that's what I call a real man – he can climb up ladders even if he isn't quite standing dead in the centre of the first rung, when he leaps you can tell where he's going to land and he can jump as high or low as you want him to.

At the end of the day, control systems work best if they're easy to use (*Jet Pac*), not too fussy (*Blues Brothers*) and re-definable.

Sonics

I will admit that you can't do much with the sound chip built in to your CPC, but that's no excuse for not making an effort to do the best with what you've got.



Cauldron – great game, shame about the music, if music is quite the right word to use in this case.

There are some games around that people will load just to have the intro music running as background noise. The number of times I've caught Dave jiving to the *Blues Brothers* theme is quite sad, really. But you'll never catch anyone grooving to the intro sounds from *Cauldron*. It's a pity to pick faults in *Cauldron* because it's such a playable romp but you do have to play in silence or else your ears might give up and run away to live with Placido Domingo.

Once again, *Prehistorik 2* picks up more awards for having amazing DMA sound on the Plus – you'd have to hear it to believe it.

Restarts

There's nothing worse than being made to feel a failure. Actually there is, and it's being made to play all the way through a huge level then getting killed just before the finishing point and sent all the way back to the beginning again. Like you do in *Robocop*. As if you aren't working hard enough already they go and plonk you right at the start when you die, just so you have to go through that hell all over again.

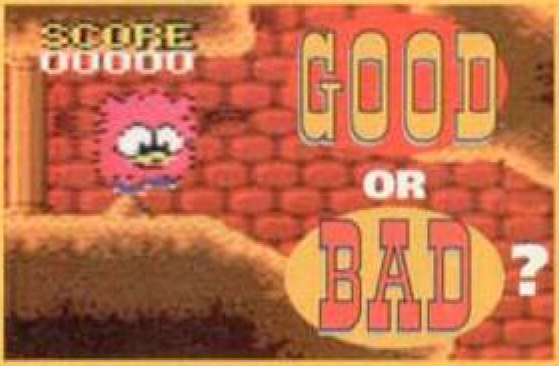
Difficulty

If you want to see one of the classic platformers of all time then just load up this month's covertape. When *Exolon* was released it had a reputation for being pretty tough. A lot of games lose out on sales by alienating the audience of games players that really aren't that good at video games. Exolon had its difficulty level set just at the right point – it's tough enough to keep the hardened platformer from finishing the game in a day, but not so hard that it scared the games wusses away.

That's where *Darkman* falls down in a big way., The difficulty curve is so steep that most players just gpt stuck at the bottom. It really is a pity as *Darkman* did have a number of good points, but they were overpowered by the sheer hell that was getting through the second level.

Riding off into the sunset

And the moral of this tale is that not all bad platformers are all bad, not all good platformers are all good, but when it comes to ugly, you'd be hard pressed to find anything as downright unappealing as *Count Duckula 2*. AA



No game in the survey got an across the board thumbs up. Will *Fluff* be able to change all that?

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THE SAVIOUR

This is one area where the **MULTIFACE** saved everything - literally. The black magic box could stop anything any time and **SAVE** it to disk or tape. When the 6128 came with a built-in drive, it was left again to the **MULTIFACE** to do all the transferring - and to perform other miracles... So, in case you just came from Mars, what does a **MULTIFACE** do? First, it sits at the back of your CPC, its magic button always ready. Press it, and the **MULTIFACE** takes control!

ACTION!

Once in action, it freezes everything and it displays its own menu. Being fully menu-driven and error-trapped, you'll probably never need the full manual that comes with the MULTIFACE. Most operations are also entirely **AUTOMATIC**, so to *SAVE* a game once you stopped it, you just *name* it, insert *disk/tape*, and press a key. You can then *return* and *continue* the program. If you get beaten later on, just reload from where you saved last and play just from there again! No need to go back to the start all the time. Or even better, the **Multiface** allows you to **POKE**

INFINITE LIVES

listed in this magazine and you'll *never* loose. The MULTIFACE comes with a built-in **TOOLKIT** that lets you inspect/alter/dump the CPC RAM. It also has its own 8K RAM and 8K ROM. Many top programs were written with the aid of the TOOLKIT and the extra 8K RAM. And do you like the **screen shots** in this magazine? They are all produced using the **MULTIFACE!**

When we announced earlier that we were to pull out of the 8-bit market, the surge of interest in the **MULTIFACE** was such, that we had to make many more. And not just the MULTIFACE - we also have the one and only disassembler,

THE INSIDER

that lets you ***see*** and ***alter*** what happens any time anywhere inside a ***RUNNING*** CPC program. It comes on a **disk** and loads inside a MULTIFACE. Press the magic button and the **INSIDER** will disassemble, find text/code, dump the CPC RAM to printer, etc. Get it at **HALF-PRICE** for **£7.95**!

LAST CHANCE!

As this goes to press, we still have enough stock of both the **MULTIFACE** and **INSIDER**. This, however, is our ***final clearance*** and once these are sold, we will NOT make any more. The **MULTIFACE** is terrific value, in fact more for the *customer* than for the *manufacturer*... We will only accept orders when we can supply the goods and we give a *full guarantee*. Plus we still offer up to **£10 OFF! mail orders!**

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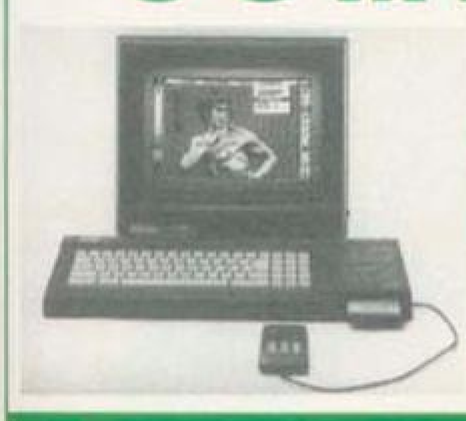
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Cheat Mode

From under 20 feet of snow, a muffled curse reveals that Lee Rouane's postie does battle yet again with the alpine conditions to bring you your monthly fix of cheating delights.

TNT Compilation

Following on from his superb POKE routines a couple of months back, the unstoppable Andy Price has cooked up some more delightful little pokettes to while away the winter nights. They are all for the TNT compilation, and they should be merged with they main DOLPHIN POKE that appeared in issue 98. For those who missed it though, here it is again:



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MALL  1·'·Speedlock·Disc·Decryption·System
HAIC  2·'······***·DOLPHIN·System·***
AAKH  3·'
EAFF  4·'·by·ANDY·PRICE
LAOI  5·'·Ocean·disk·loaders·(8k·sectors)
GAGI  6·'·Try·again·Ocean!!!!
AAOH  7·'
HAEA  10·DATA·21,0E,80,11,09,A2,01,00,16C
HAEG  20·DATA·02,ED,B0,C3,80,BE,1E,06,3C4
HAFF  30·DATA·18,08,F3,1E,65,01,7E,FA,30F
HANI  40·DATA·ED,59,06,F5,ED,78,1F,38,3FD
HAHI  50·DATA·FB,ED,78,1F,30,FB,1D,20,3E7
HAEH  60·DATA·F1,F3,C9,0E,C8,21,A0,A3,4E7
HABF  70·DATA·16,00,C3,8E,A2,4F,DD,21,356
HAFG  80·DATA·A0,A3,DD,7E,00,B9,28,0A,389
HALG  90·DATA·DD,23,DD,23,DD,23,DD,23,400
HAFI  100·DATA·18,F0,DD,56,01,DD,5E,02,379
HAHG  110·DATA·DD,46,03,3E,19,93,B8,38,300
HAKH  120·DATA·07,7B,80,3D,4F,C3,74,A2,367
HAOL  130·DATA·0E,18,C5,F5,E5,D5,CD,74,4DB
HAKI  140·DATA·A2,D1,E1,F1,C1,5F,78,93,570
HABG  150·DATA·47,7C,83,67,1E,01,14,18,1F8
HACL  160·DATA·DA,3E,4C,32,7E,A3,3E,06,2FB
HALH  170·DATA·32,83,A3,79,1D,93,32,1C,2CF
HAJH  180·DATA·A3,7B,32,07,A3,1E,C1,4B,324
HAAI  190·DATA·C3,8F,A2,59,7A,32,77,A3,413
HAGG  200·DATA·32,80,A3,22,BD,A2,7B,32,383
HAHF  210·DATA·82,A3,79,32,84,A3,11,7A,382
HACK  220·DATA·A3,CD,D7,A2,3A,97,A3,B7,514
HAHI  230·DATA·20,F4,11,74,A3,CD,C1,A2,46C
HAGI  240·DATA·11,7A,A3,CD,D7,A2,11,7D,402
HAPJ  250·DATA·A3,21,91,AC,18,1E,CD,D2,3D6
HAOH  260·DATA·A2,11,78,A3,CD,D7,A2,21,435
HAIJ  270·DATA·97,A3,CB,6E,28,F3,C9,01,458
HAHF  280·DATA·5F,A3,18,0B,01,47,A3,21,231
HACH  290·DATA·97,A3,18,03,01,10,A3,ED,2F6
HAEF  300·DATA·43,09,A3,1A,47,C5,13,1A,242
HAGK  310·DATA·01,7E,FB,F5,ED,78,87,30,48B
HACP  320·DATA·FB,FA,EF,A2,F1,0C,ED,79,5E9
HAFG  330·DATA·06,08,10,FE,C1,10,E6,01,2D4
HADH  340·DATA·7E,FB,11,00,00,C3,47,AC,340
HAML  350·DATA·0C,ED,78,0D,1B,ED,78,F2,3F0
HAMG  360·DATA·10,A3,7A,B3,C2,0B,A3,11,361
HABG  370·DATA·00,00,0C,ED,78,77,0D,23,218
HAGL  380·DATA·1B,7A,B3,CA,3A,A3,ED,78,454
HAGI  390·DATA·F2,29,A3,E6,20,C2,1D,A3,446
HACK  400·DATA·C3,44,A3,0C,ED,78,0D,ED,415
HAGH  410·DATA·78,F2,3A,A3,E6,20,C2,36,445
HAJJ  420·DATA·A3,21,97,A3,ED,78,FE,C0,521
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Seymour goes to Hollywood

Another request for tips that we simply cannot ignore is for that brilliant find-'em-up featuring that infamous tub of lard, *Seymour Goes To Hollywood*. Perhaps now all the baying thousands can stop bleating (or indeed baying) and get down to finishing this masterpiece. Once again, David Hayes of Neilston in Glasgow comes up with the goods. Congrats, David, it's not often you get your name in Cheat Mode twice with the same solution.

1 Get the movie specs from the limo, then go right. Once past the security guard you drop them again.



Seymour was last spotted as an extra in an instant mashed potato ad.

2 Go right until you reach the first studio then left twice. Get the dictionary and give it to Pippa (the receptionist).

3 Keep going right until you reach the first tree hut. Enter and get the jacket. Go to the top right hut, enter and get the spanner. Make your way back to the first studio and leave the jacket outside.

4 Go to the lift and drop the spanner. Go to the first floor (press K) and get the pom-pom. Go up another floor and work around to the deflated balloon. Pick it up and return to the lift.

5 Go to the top floor then go right. Get the studio key. Go back to the first studio (M to make the lift go down). Drop the key at the door. Leave the balloon and get the jacket.

6 Enter the *Grease* set, give the jacket to the biker and get the pump. Go right, enter the Malt Shop and give the pom-pom to Sindy. Take the key and the parrot food.

7 Leave the set, get the balloon, go right into the second hut and drop the balloon and pump. Go to the top-right hut, drop the parrot snack beside the door. When the parrot leaves collect it. Exit the hut, go to the top-left platform and repeat. Go left and repeat until the parrot enters the hut. Get the key and the dagger.



8 Go to the first studio, drop the dagger, get the key. Go left five times and open the door. Go to the *Grease* set, then left, right and open the door.

9 Go to second tree hut, get the balloon and the pump and drop on the platform. Ferry all four items across from the island.

10 Get the key, go up and left to the hut and get the key. Go to the *Grease* set. Go left, open the door and work through the set, collecting the key. Go left, open the door. Left twice again, open the door and return to the Grease set.

11 Get the gloves and go into the *Sherlock Bones* set. Make sure the gloves are last on the inventory, go right, get one coin and the cards, then the arrest warrant from Rick Bracy. Go to the *Western* set, enter saloon, talk to Billy the Kid, then give the evidence to Rick Bracy.

12 Go to the Western set, climb the stairs in the saloon, go left and enter the green door. Talk to Sal and give the letter to Rick. Get the lollipop and coin from the *Sherlock Bones* set, go to the limo, then left and into Greasy Lil's. Give her the coin, then take a buttie and the key and go to the *Grease* set, dropping the lollipop off at the limo.



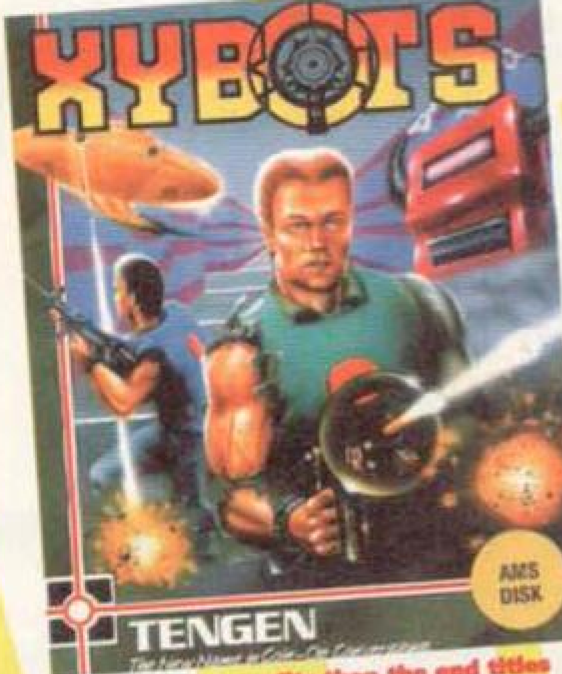
13 Pop along to the *Western* set, and



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HANJ  430·DATA·38,FA,0C,ED,78,77,0D,23,34A
HAFL  440·DATA·3E,05,3D,20,FD,ED,78,E6,3E8
HAAK  450·DATA·10,20,E9,C9,ED,78,F2,5F,498
HAJM  460·DATA·A3,C9,D9,01,7E,FA,ED,49,4F4
HALL  470·DATA·01,8D,7F,ED,49,AF,08,D9,3D3
HAPC  480·DATA·E9,03,0F,00,00,01,08,02,106
HAFE  490·DATA·4A,00,09,4C,00,00,00,C8,167
HADH  500·DATA·02,C8,2A,FF,00,07,0C,0F,215
HALB  510·DATA·00,03,04,06,01,02,0E,00,01E
HAAC  520·DATA·00,16,15,99,48,00,00,00,10C
HAKB  530·DATA·00,C7,02,00,00,00,00,00,0C9
GADO  540·DATA·00,00,00,00,00,00,00,00,000
OACC  550·n=·8:a=&8000:l=·10:WHILE·l<·550:GOSU
      B·560:WEND:GOTO·600
NACG  560·cs=0:FOR·x=1·TO·n:READ·v$:v=VAL("&"+
      v$):POKE·a,v
LALH  570·cs=cs+v:a=a+1:NEXT:READ·c$:c=VAL("&"
      +c$)
OALK  580·IF·c<>cs·THEN·PRINT"Data·error·in·li
      ne·",l:END
EAJH  590·l=l+10:RETURN
IAPG  600·MODE·1:INK·0,13:INK·1,0:BORDER·15
KAAL  610·PRINT"Insert·game·disc,·then";
KAMI  620·PRINT"·press·any·key..":CALL·&BB18
AAAO  630·'
GALO  640·'·Cheats·goes·here
```

Xybots

First to be hacked into oblivion is that two-player robot farce, *Xybots*. Infinite credits are provided and this program should be merged with the main POKE or typed directly after it.



You get more credits than the end titles of Superman 2 with our TNT cheat.

```
GAMG  650·'·Xybots·TNT·disk
EANL  660·'·by·ANDY·PRICE
KADG  670·'·Merge·with·Dolphin·System
AAFO  680·'
GAFI  690·DATA·cd,0d,a2,cd,26,a2
FAFO  700·DATA·3e,03,21,00,c0,cd
GAPB  710·DATA·30,a2,cd,09,a2,3e
FAHI  720·DATA·07,21,40,00,cd,30
FAKL  730·DATA·a2,3e,c3,32,40,00
FAGO  740·DATA·21,aa,be,22,41,00
FAOI  750·DATA·21,40,00,c3,65,a3
FAEP  760·DATA·f3,cd,6c,00,31,40
FAFI  770·DATA·00,21,db,01,16,00
GANF  780·DATA·0e,c8,cd,e4,00,3e
FAOJ  790·DATA·01,21,84,03,cd,86
FAAP  800·DATA·08,af,32,1f,72,c3
CANO  810·DATA·59,00
FAHJ  820·FOR·x=&BE80·TO·&BEC9
FACK  830·READ·a$:a=VAL("&"+a$)
GAOH  840·POKE·x,a:y=y+a:NEXT
FAPG  850·IF·y<>&1A19·THEN·870
EAIJ  860·MODE·1:CALL·&8000
HAGJ  870·PRINT"Error·in·Cheat"
```

Multiface POKE

721F,00 Infinite Credits

Toobin'

Second game oblivion bound is that waterfall frolicker, *Toobin'*. Once again, infinite credits are provided and you should also merge this with the main POKE or type it directly afterwards.

```
GAOE  650·'·Toobin·TNT·disk
EANL  660·'·by·ANDY·PRICE
```

Continues on next page.

drop the buttie at the locked door to the left and then open the door to the right.

14 Get the ball from the tree hut and go to the *Frankenstein* set. Give Towser the ball.

15 Go to Lil's, collect the foot and then the hand from the limo. Go to the Frankenstein set and get the other foot. Work through to below the table and drop everything.

16 Get key and open the last door (where the buttie is). Go to the *Rick Bracy* set, take the body and gloves and get a coin from the *Sherlock Bones* set. Go to the *Frankenstein* set. Leave the gloves and coin on the first screen. Put the body on the table.



17 Repeat for the hand (third floor lift), head (first floor lift), arms (from the island and the *Western*), and legs (second hut and the *Western set*).

18 Get coin and gloves. Put the coin into the machine, then, wearing the gloves flick the bottom and top switches. Flick the top again, then the bottom. Go right, get the brain and drop it outside the *Grease* set. Get the dagger, mallet and buttie, then enter the *King Kong* set.

19 Make your way to the top, give King Kong the buttie and use the dagger to cut the girl free. Drop the mallet, get the medal and collect the brain. Then get the clockwork heart from the *Flash* set.

20 Go to the *Wizard of Oz* set and give all three to Dorothy. Take the towel.

21 Get the lift to the third floor and collect the potion. Go to the *Flash* set.

22 Place the towel in the teleporter, operate the computer, then repeat to teleport yourself.

23 Go right and get the lift. Go left, past Ming and get the detonator. Make sure that you are still carrying the potion. Pass Ming, drop the potion then teleport back.

24 Get the flowers from the island and the explosives from the *Rick Bracy* set.

25 Give the flowers to Pippa, take the key and get the lift to the top floor.

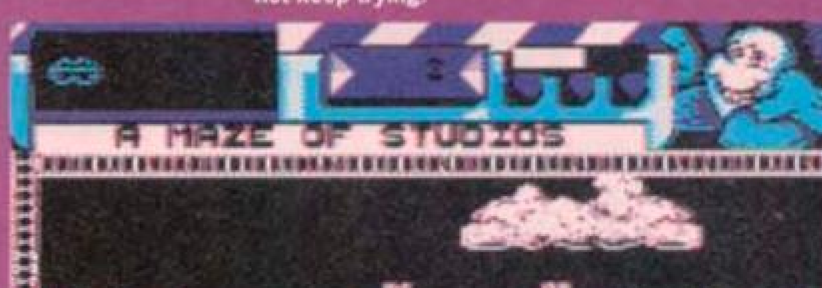
26 Go left and open the door. Drop the explosives in front of the safe, drop the detonator on the settee. Enter room and collect the script.

Once finished you have to find all the Oscars. Good old David comes up with the goods again with all these Oscar-winning locations:

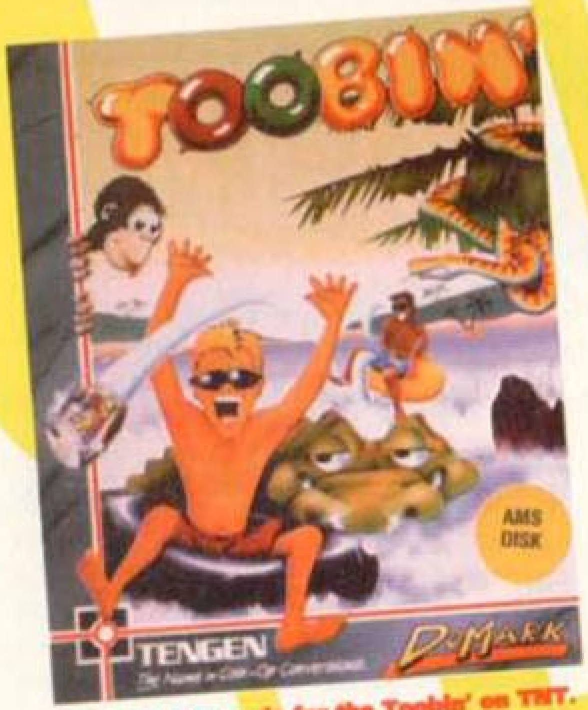
1 In the props department, hidden underneath a barrel.
2 At the lift underneath the Yukka plant
3 In the hut where you found the ball, underneath the window pane.
4 To the right of this hut, on the platform, under the leaves.
5 Top-right treehut, underneath a barrel.
6 In the *Wizard of Oz* set – go to the top of the castle, fall instead of jumping up to the flying monkey and land on the platform. It's under the leaves.
7 On the *Rick Bracy* set in a lock-up under a packing case.



8 First screen in the *Sherlock Bones* set halfway up a tree.
9 In Sal's Saloon – jump on to the piano, then across to the last chandelier, then try to pick it up.
10 Under the packing case in the corridor of Sal's Saloon.
11 Under the bedknob in Sal's bedroom.
12 In the first room in the *Frankenstein* set, hidden under a railing.
13 In the Secret Lab, *Frankenstein* set.
14 In the *Flash* set – on transporting, jump up and right to Ming's armoury.
15 In the space base under the first air vent.
16 Jump across the third chandelier in Sal's saloon, hold down enter and it usually appears – if not keep trying.



Strangely, something seems to be screaming out, "SPECCY PORT!"



Tricks of the trade for the Toobin' on TNT.

```
KADG  670·'·Merge·with·Dolphin·System
AAFO  680·'
GAFI  690·DATA·cd,0d,a2,cd,26,a2
FAIO  700·DATA·3e,06,21,00,c0,cd
GAPB  710·DATA·30,a2,cd,09,a2,3e
FAII  720·DATA·08,21,40,00,cd,30
FAKL  730·DATA·a2,3e,c3,32,40,00
FAGO  740·DATA·21,aa,be,22,41,00
FAOI  750·DATA·21,40,00,c3,65,a3
FAEP  760·DATA·f3,cd,6c,00,31,40
FAFI  770·DATA·00,21,db,01,16,00
GANF  780·DATA·0e,c8,cd,e4,00,3e
FABK  790·DATA·04,21,84,03,cd,86
FAJP  800·DATA·00,3e,a7,32,e5,9c
DAPK  810·DATA·c3,59,00
FAPJ  820·FOR·x=&BE80·TO·&BECA
FACK  830·READ·a$:a=VAL("&"+a$)
GAOH  840·POKE·x,a:y=y+a:NEXT
FAAH  850·IF·y<>&1B46·THEN·870
EAIJ  860·MODE·1:CALL·&8000
JAHD  870·PRINT"Error·in·Cheat":CLEAR
```

Multiface POKE

9CE5,A7 Infinite Credits

HeroQuest



Shane McGuiness from Drogheda in Ireland certainly seems if he has had his 'Guinness' (*I bet that's not the first time he's heard that one – Dave*) with this excellent cheat for that hack-and-slash feast, *HeroQuest*. He suggests that to get as many gold coins as you want, follow these steps carefully:

1 After choosing your character(s), load the quest entitled *The Stone Hunter*. When you start this mission, exit the dungeon immediately for a free 100 gold coins – can't be bad.

2 Allow the computer to load the Options Menu, and do it all again.



Hard Drivin'

Bouncing back with an excellent POKE is the unstoppable Andy Price, this time taking all you death-defying Skoda fans to another dimension with Extra Time cheat

```
HALK  1·'·Hard·Drivin'·TNT·disk
EADF  2·'·by·ANDY·PRICE
AAKH  3·'
GAOH  10·OPENOUT"x":MEMORY·&2FF
EAAK  20·CLOSEOUT:MODE·1
FALK  30·LOAD"memload",&300
FAHF  40·FOR·n=&BE80·TO·&BE9C
FAMG  50·READ·a$:a=VAL("&"+a$)
EAJE  60·POKE·n,a:NEXT
CAIN  70·CALL·&BE80
CANH  80·CALL·&300
DAOD  90·POKE·&18B9,0
CALK  100·CALL·&521
FACD  110·DATA·3e,c9,32,f3,04
FABD  120·DATA·21,91,be,7d,32
FAIC  130·DATA·a2,04,7c,32,a3
FAGD  140·DATA·04,c9,01,c6,7f
FAHJ  150·DATA·ed,49,af,32,c2
EALK  160·DATA·48,c3,00,ff
```

Multiface POKE

4BC2,00 Extra time

AA75 Covertape

Having watched my dog get bombarded by the postman with requests for a cheat for the *AA75* covertape (he waits under the letter box, you see – the dog, that is) here's one we made earlier, or rather S (Saddam? Spaghetti?) Newson from Hemel Hempstead did. Delete all cheats you don't want.

```
IAPB  10·REM·--------·AA75·COVERTAPE·--------
JAEE  20·REM·--·IMPOSSABALL·AND·'CISCO·HEAT·-
HAHP  30·REM·---------·TAPE·AND·DISC·---------
IAKH  40·REM·--------·BY·STEVE·NEWSON·-------
EAHP  50·REM·*·'CISCO·HEAT·*
GALC  60·REM·LEAVE·THESE·LINES
GAOH  70·DATA·21,8F,BE,22,A1,87,21,B7
GAKL  80·DATA·BE,22,EE,87,C3,D7,80,AF
FACD  90·REM·INFINITE·TIME
GAEH  100·DATA·32,6B,39,32,80,39,32,95
CAIF  110·DATA·39
GAFE  120·REM·ALWAYS·1st·PLACE
IAMJ  130·READ·a$:IF·a$="END"·THEN·GOTO·180
GAAI  140·DATA·21,3E,01,22,A1,2A,2A,32
DADA  150·DATA·A3,2A
DAIC  160·REM·LEAVE
EAAB  170·DATA·C3,40,00,00
CALE  180·DATA·X
FAJI  190·REM·*·IMPOSSABALL·*
FAPK  200·REM·INFINITE·LIVES
EAGD  210·DATA·AF,32,62,A0
FANF  220·REM·INFINITE·TIME
EAJN  230·DATA·3E,C9,32,2D,92
JACL  240·REM·NEXT·LEVEL·WHEN·TIME·RUNS·OUT
GAMI  250·DATA·21,CA,4E,11,91,00,22,5B
EAOO  260·DATA·A0,ED,53,5D,A0
FAKM  270·REM·LEAVE·THIS·LINE
EAJI  280·DATA·C3,40,00,END
DAGD  290·add=&BE80
IAJJ  300·READ·a$:IF·a$="END"·THEN·GOTO·340
IAIF  310·IF·A$="X"·THEN·ADD=&BE87:GOTO·300
IAMM  320·POKE·add,VAL("&"+a$):add=add+1
CACK  330·GOTO·300
DAPN  340·MEMORY·&7FFF
EALG  350·LOAD"MENU",&8000
DAKA  360·CALL·&BE80
```

Multiface POKEs

Impossaball	92D2,C9	Infinite time
	A062,AF	Infinite Lives
Cisco Heat	396B,AF	] Infinite Time
	3980,AF	] (do all three POKEs)
	3995,AF	]

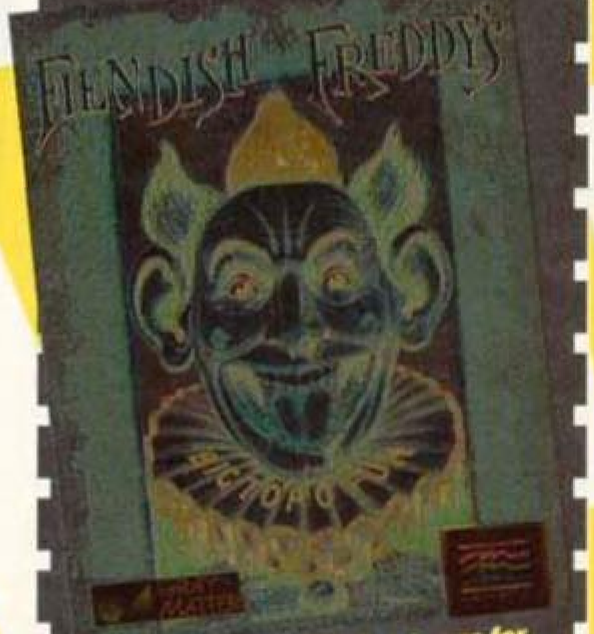
Are you befuddled by listings?



Don't panic! There's a full explanation of how to type in listings and what the codes at the beginning of each line mean in the Type-Ins section which starts on page 32.

Fiendish Freddy

Ross Watson from Redcar in Cleveland suggests that on the tape version of *Fiendish Freddy* (hang on, I'm getting a sense of presque vu*), at the end of each judging session note down the number on the tape counter then play the next event. Get judged on that, and then rewind to whatever number you wrote down. You will now be judged on your original event and you can keep on doing this time and time again until you get the required $10,000.



It's enough to put you off clowns for life – if the fact that they're woefully unfunny hasn't done that already.

Graham Gooch's Test Cricket



More game-winning tips now from our man in March, Andrew Cranwell. *Graham* 'dead cat on lip' *Gooch's Test Cricket* is this month's target – apparently this is Andy's Dad's favourite game.

1 At the start of the game it asks you to Edit the team if

*Read *Catch 22* if you want to know what he's on about – Dave.

Get into the mode

Stuck on a game? Or perhaps you've found a cheat or hint that you reckon other people should know about. Either way, if you want to get into the Cheat Mode, the address you need to write to is: Cheat Mode, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

you want to. For this cheat you do, so click on Yes.



2 Select the way you want your teams to be set up and then Edit them. Change all the figures in the columns to 00 and then all the Slow people to Fast.

3 Save the teams.

4 Now play a good 40 overs without your opponents' scoring.

Andy also blatantly asks me to mention Andrew Pilbeam, Martin Wright and Steven Hunt as his accomplices in cheating. Consider it done Andy.

Trantor

Age-old frolics now with a corking tip (Multiface owners only) for that supremo platformer, *Trantor*. Alexander Franklin from Warnbro (sounds like a 'hip' street saying) in Western Australia suggests that to finish the game you should first disable all the computers and then activate the Beam Control computer. Now, freeze the game with the Multiface, and, using the Window option, point to address 23D8 Hex. Here you will find a three-letter code. Return to the game and type it in. Now step on to the transporter at the right of the terminal and pull down on the joystick/'Down' key. Congrats, the end is in sight.

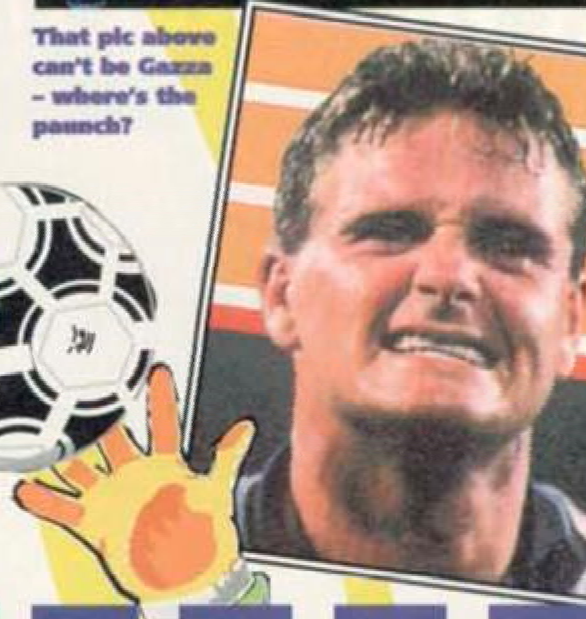
Gazza's Super Soccer

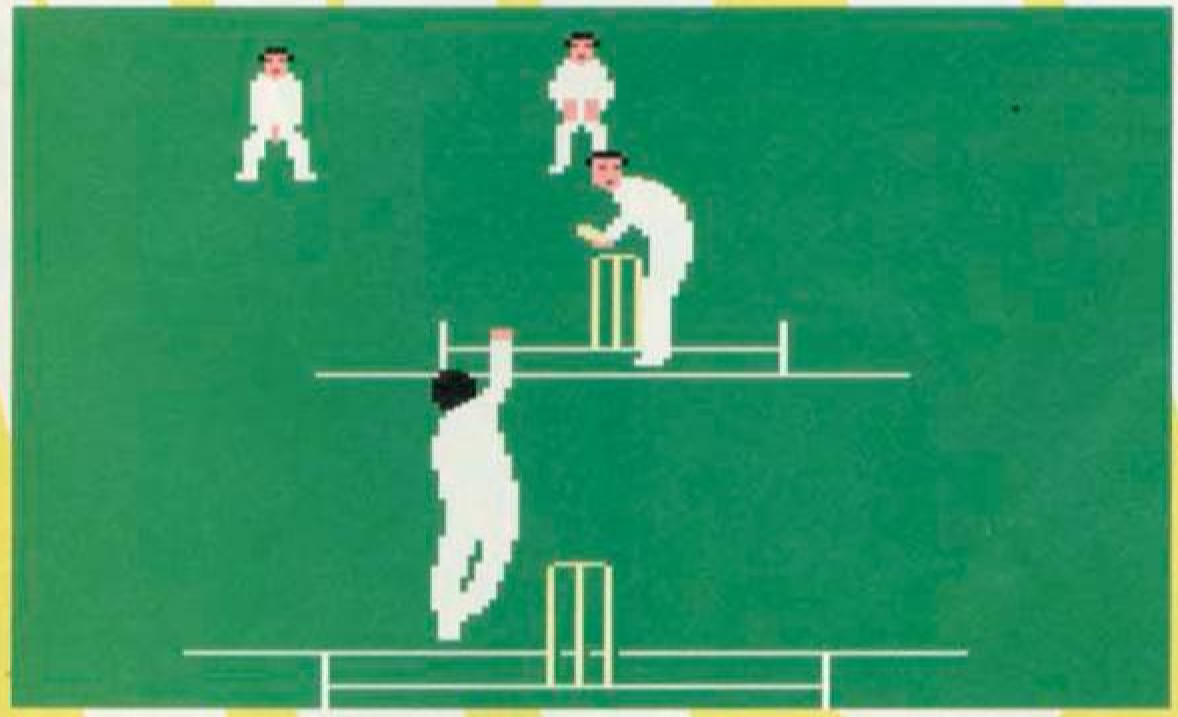


Ross Watson from Redcar in Cleveland suggests that on the tape version of *Gazza's Super Soccer*, if you hold down the keys CTRL/SHIFT/ESC the ref will blow for full time (this is best used if you're winning at the time, by the way).



That pic above can't be Gazza – where's the paunch?





After darts and snooker, cricket must be the most popular sport among fat, middle-aged men.

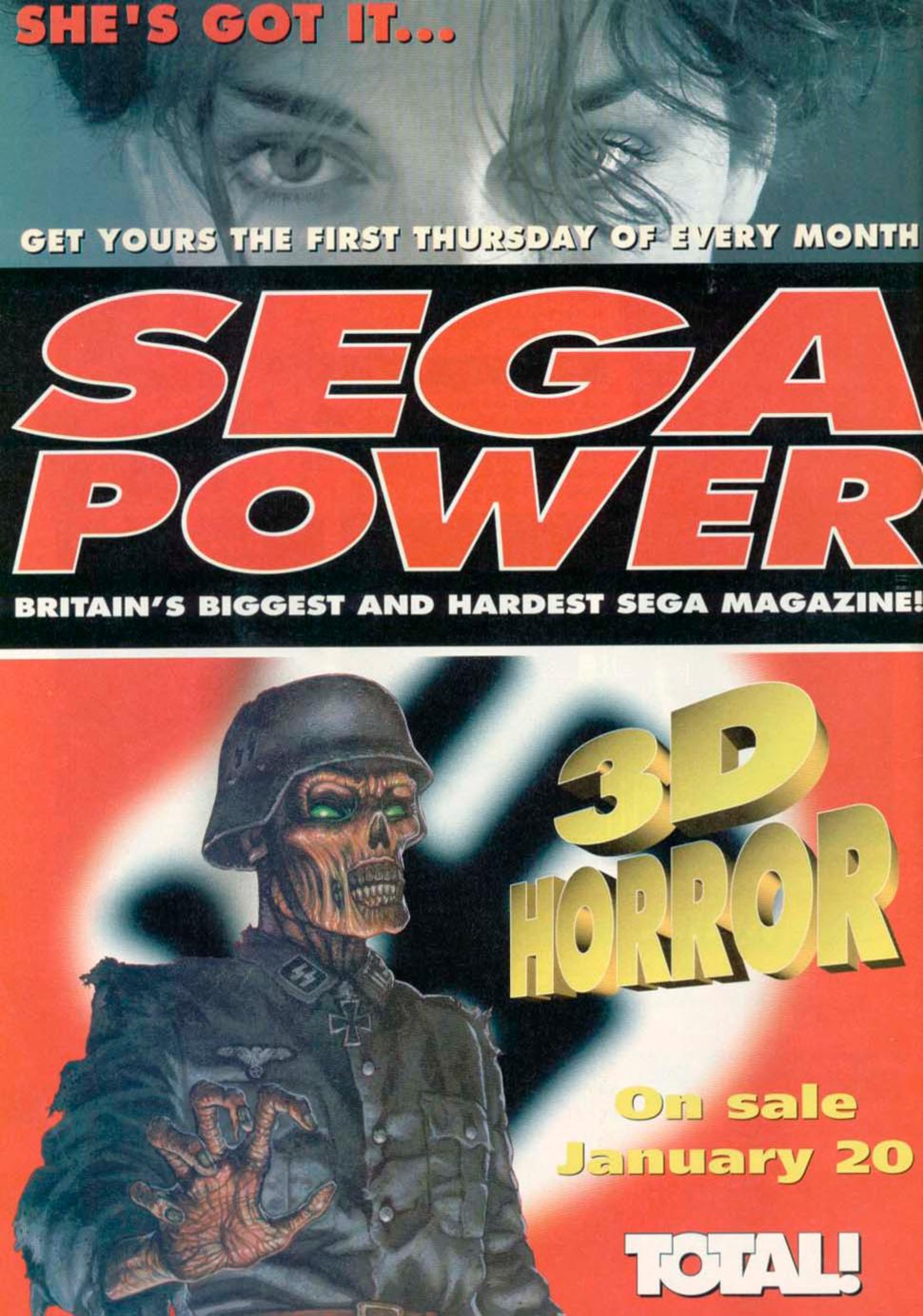
Poking the multiface way

1 Make sure that you've got a Multiface plugged into the back of your CPC; it helps.
2 Load the game as normal.
3 Press the RED button on the Multiface.
4 Press 'T' for tool.
5 Press '*' to select the code.
6 Press 'H' for HEXADECIMAL input.
7 Press 'SPACE' for input.
8 Type in the ADDRESS (ie, 3A7C)
9 Type in the POKE (ie, A7)
10 Press 'RETURN'
11 If there's more than one poke go to 7.
12 Press 'ESC' back to the menu.
13 Press 'R' to return to the game.

The Manic multipoke mania zone

Ye Gods! After last month's plea for more POKEs we suddenly got inundated with more than you could shake a stick at. Ken Wood (good on yer Ken) of Blyth and CB Thomas (now, now, first names please) provide a plethora of poking delights. Eee, I don't know – you get the same names writing in for years and then two new 'uns turn up at once. Just like the *AA* Editors really (*hah! – Dave*). As usual, the initials indicate which POKEster to shower with praise.

Game	Format	Poke, Address	Effect
Midnight Resistance (CB)	Tape/disk	470F,00]	Keep keys when hit (enter all three POKEs)
"		4710,00]	
"		4711,00]	
"		0E28,xx	xx=No of lives (1-FF)
"		19BA,xx	xx=No of keys (1-FF)
"		48DC,xx	xx=Type of gun (1=FLAME, 2=3-WAY, 3=FULL AUTO, 4=SHOTGUN)
(*Yes we're still talking MR here*)		4F1B,xx]	xx=Gun Ammo (1-FF) (enter both POKEs)
		4F1C,xx]	
"		48ED,xx	xx=No of backpack (1=NITRO, 2=HOMING, 3=SHOWER)
"		4F2C,xx	xx=No Of backpack Ammo (1-FF)
Deliverance 1st load (KW)	Tape	1131,00	Infinite lives
"		49EB,00	Infinite boulders
"		4B7A,00	Infinite arrows
"		4BF6,00	Infinite spikes
Deliverance 2nd load		1137,00	Infinite lives
"		493E,00	Infinite boulders
"		4AD1,00	Infinite arrows
"		6469,00	Infinite spikes
Deliverance 3rd load		1134,00	Infinite lives
"		40D5,00	Infinite boulders
"		59A9,00	Infinite spikes
Rambo 3 (KW)	Tape	1BA6,00	Infinite continues
"		70D1,00	Infinite arrows and bullets
Prehistorik 2 (KW)	Disk	0E11,00	Infinite lives
"		4707,00	Infinite energy



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The Examiner

Debby Howard has surfaced from her lair in the murky depths that are the dark dungeons below the AA office to bring you the latest news and reviews from the world of adventures...

Lords & Ladies of Adventure



If you are stuck on one of the games listed below, these kind souls are willing to help you. Please remember to enclose an SAE with your enquiry and DON'T ask for a full solution, as you might be disappointed. If you want to become a Lord or Lady please write in with a full list of the adventures you've completed.

- ***Heroes Of Karn*** **– Ewan "Chill" Riley, 67\1 Ferry Road, Leith, Edinburgh.**
- ***Five On A Treasure Island, Werewolf Simulator*** **– Samantha Blair, 21 Obelisk Rise, Kingsthorpe, Northampton, NN2 8QT.**
- ***Famous Five On A Treasure Island*** **– Tommy MacDonald, 7 County Cottages, Piperhill, Nairn (*where's that? – Dave*).**

Cluepot

Thanks to Phill Ramsay from Manchester for this month's Cluepot contributions.

Darkest Road

Wear the shoes when you enter the forest.

Dragon Slayer

TIE ROPE to HOOK and SWING HOOK to knock out the Goblin.

Starship Quest

Get along to the sickbay and SAY GOODBYE to Doctor McGinty.

Case of the Beheaded Smuggler

Examine the PATH, the ASH and the BODY.

- If you want to contribute to the Cluepot, send your adventure tips and hints to The Examiner, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath Avon BA1 2BW.

REVIEW

The Prophecy

Written by Alex Gough
Price: Disk £4, Tape £2
Available from: The Adventure Workshop, 36 Grasmere Road, Royton, Oldham, Lancashire, OL2 6SR. Cheques/Postal Orders payable to: PM Reynolds.

...And the prophet Colias came from the wilderness and spoke to the people, saying these words:

"When the star with the tail is returned and that which was lost is found, a King shall arise in the West who will unite the land and challenge the power of the eternal one, so that which has lived too long will die. And he will be strong and wise and brave and perform great deeds so this may come to pass."

And the prophet returned to the wilderness (as prophets do) saying, "That which must be done will be written."

Many scholars dismiss this passage in the *Life of Colias* as a brief lapse of sanity for a man whose works and teaching have been revered throughout the known world, and probably beyond if any interested aliens were eavesdropping. Yet when the Sorcerer seized power in the Eastern Kingdom over 400 years ago, and seemed to maintain his youth despite the passing of time, people began wonder if Colias knew a thing or two.

And now, with the latest and probably last rebellion in the Eastern Kingdom ruthlessly crushed the Emperor is turning his gaze with avarice to the hopelessly divided Western Lands... well, perhaps that Colias hadn't just been too long in the bath when he spouted that prophecy. But the real clincher was that the cornet of Sayla was riding high in the night sky. The Westerners looked to the East, read the prophecy and prayed for a King.

But to you, living in the far west of the country, the problems of the East seem small compared to the day-to day troubles of running your farm. Besides, what could you, a poor farmer, do to save the western lands? You'd be surprised.

Although this adventure was written with the help of *GAC* it is a text-only adventure which uses colour cleverly to alter between day and night as you play the game. The only trouble with this is that the daylight colours are both light colours (light blue background and yellow writing). This could cause a few problems for green-screen players.

The market place seems the ideal place for dropping all your objects as you explore the area, and you'll meet many colourful characters moving around along your way who add to the atmosphere.

I seemed to spend most of my time trying to kill the various baddies that cropped up amidst the gameplay, which meant that instead of getting on with the business of trying to solve particular sub-tasks most of my time was spent typing KILL PATROL or other such mundane commands. This, I'm afraid, turned me off the adventure a little bit, although I'm sure that some of you enjoy that sort of game play.

You can get killed, so I would recommend that you save on a regular basis. If you're looking for something just that little bit different then this will be right up your street.

62%



Where to go

If you're looking for new and re-released adventures, then drop the following people a line (enclosing a SSAE or course) for their latest stock list.

- **Amstrad Adventure Solution Service, 10 Overton Road, Abbey Wood, London, SE2 9SD.**
- **Adventure Workshop, 36 Grasmere Road, Royton, Oldham, Lancashire, OL2 6SR.**
- **WoW Software, 78 Radipole Lane, Weymouth, Dorset. DT4 9RS.**

Elite Masterclass

They tried to constrain it, they tried to keep it boxed in, but it was no good. It exploded from the centenary covertape and voraciously consumed two pages of issue 100. But Elite's hunger was not abated and so it forced Clur to give it two more pages of exposure in the next issue...

Have you seen Elite's manual? It gives the Hong Kong phone directory a run for its money. And we foolishly thought we could cover all the vital points in just two pages last issue. Well, we nearly made it. We gave you all the bare essentials you needed to know to get started. But there are loads of finer points of the gameplay and playing hints left to explain.

So here we go with the ultimate tips guide for *Elite*. There's everything from assessing the ultimate bug in the game to loads and loads of multiface POKEs. Have fun folks.



Hyperspace to your destination, but be warned – there could be some nasty pirates lying in wait for an innocent space trader like yourself to come flying by.

In the dock

Ask anyone what he toughest thing to get the hang of in *Elite* is and more than likely they'll say, "docking with a space station without the aid of a docking computer". So here's a cheat to avoid all the hassle that docking brings. First chose a system to hyperspace to and go there. Then (I know it sounds drastic) get yourself killed by any means possible. Press Y in response to the "Load new commander?" prompt, but then save the commander to tape. Now return to the game and you'll find yourself docked at the space station of the system you hyperspaced to.

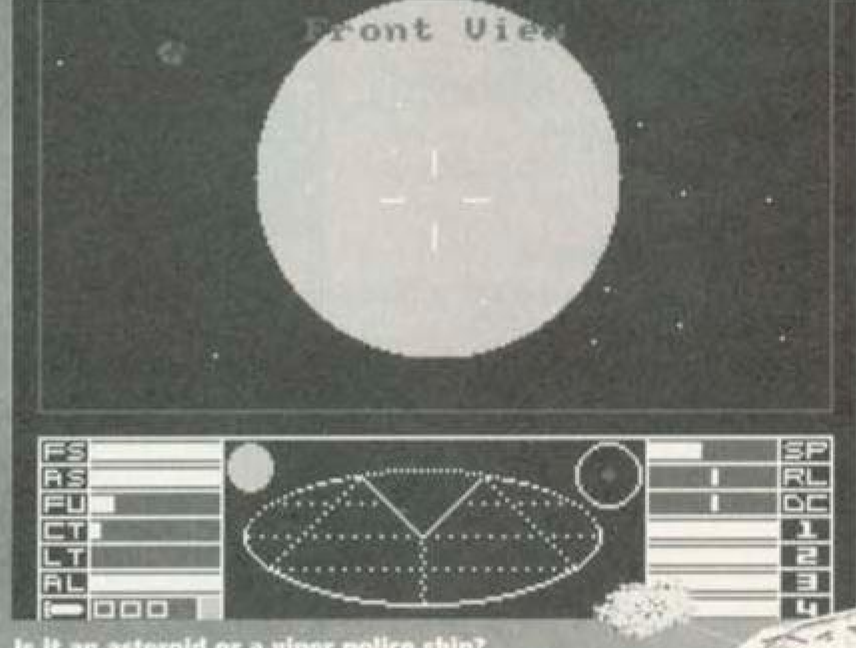
Multiface POKEs

EFFECT	ADDRESS	POKE
Indestructibility	787C	00
	7B61	00
	6E63	C3
Cloaking device	4902	21
	4906	F6
	F908	00
ECM system jammer	8932	18
	48CD	00
	48C3	00
Instant hyperspace	4CF6	18
	507F	00
No hyperspace range limit	4C08	00
	4C12	00
Infinite credits	FE78	03
	FE86	18
Infinite fuel	4F02	00
Infinite missiles	382D	00
Constant galactic hyperspace	4BFA	00
Constant escape pod	3849	00
No cargo loss on escape	3866	00
No laser temperature rise	7A4F	00
One hit destroys enemies	7AA8	00
Space stations launch Thargoids	896B	00
Missiles able to blow up space stations	8A8F	00
Constant energy bomb	2F6A	00
Remove blinding flash from energy bomb	2F7A	00

A hold like a TARDIS

Once you've docked, even if you've got loads of money, there is a limit to how much you can buy, 'cos you've only got so much cargo space on your ship. And there's not a lot you can do to increase your cargo space apart from buying a load of cargo pods. Or is there? Try this one, it's tough, but it works:

1 Find a cluster of two to three systems no more than 2.5 light years apart.
2 Sell all cargo. If possible arm yourself to the hilt with a mining laser, cloaking device and energy.
3 Enter Witch Space by the method described above, but switch on the cloaking device just before you hyperspace and then destroy all but one Thargon.
4 Switch off the cloaking device and wait 'till Thargiets appear. Destroy the Thargon mother ship and collect the Thargiets.
5 Repeat this until you're sure you've got enough alien items or are about to get your ship destroyed.
6 Enter the normal system and abandon the ship using the escape pod. When you get your new ship you'll have a 35-ton cargo bay plus all the alien items. Sell these and



Is it an asteroid or a viper police ship? Check out the combat tips to find out.

The price is right

So that you know when it's best to buy what product here's a specially compiled list of the average prices of the various goods that you can purchase around the universe. (Remember, buy cheap and sell at extortionate prices – if the planet you're on doesn't offer a good price then go somewhere else.)

ITEM	AVERAGE PRICE
Food	4.4 credits per tonne
Textiles	6.4 credits per tonne
Radioactives	21.2 credits per tonne
* Slaves	8.0 credits per tonne
Liquor/Wines	25.2 credits per tonne
Luxuries	91.2 credits per tonne
* Narcotics	114.8 credits per tonne
Computers	84 credits per tonne
Machinery	56.4 credits per tonne
Alloys	32.8 credits per tonne
* Firearms	70.4 credits per tonne
Furs	56.0 credits per tonne
Minerals	8.0 credits per kg
Gold	37.2 credits per kg
Platinum	65.2 credits per kg
Gem Stones	16.4 credits per kg
Alien Items	27 credits per tonne

* These items are defined as illegal by the Galactic Government, so trading in them tends to be a mite risky.

you can use the extra cargo space. This will disappear if you have to use the escape pod again and aren't carrying alien items, but you can always repeat the process.

Blasterama

If you're just into a bit of a blast then why not have a go at taking on the Thargoids in Witch Space. It's a deadly pastime to say the least, but if you have the urge to blast a few speedy aliens then here's a trick to automatically take you there. First choose a system to hyperspace to and pause the game. Press the F key, restart the game and then hyperspace. You appear in Witch Space with three or four Thargoid motherships aiming their weapons at your hull. To leave, just pause the game, press F, restart and hyperspace again to the system you originally intended.

Cloaking devices

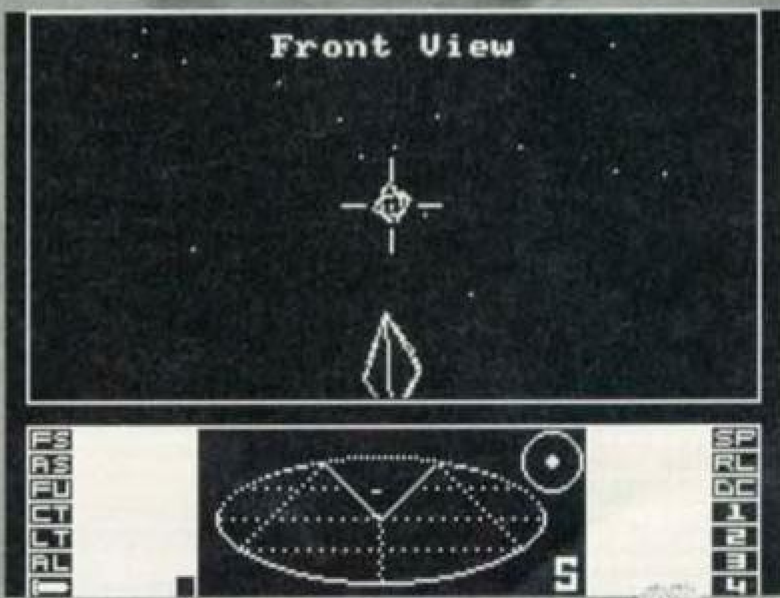
To be sure of winning through there's one thing that every good pilot should not be without – a cloaking device for your ship. To get hold of a cloaking device you must destroy a ship that already has one – they appear as a flashing spacecraft. You have to have a rating of at least 'dangerous' before a cloaked ship will appear. After destroying it scoop up the cargo pod that remains in the debris from the ship. The Y key will now toggle the cloaking device on and off, but it will drain your energy rapidly and will automatically switch itself off if your energy levels get too low.



Career prospects

The message "Right on Commander" is the key to moving on up the ratings ladder. To start on the ladder to improving your status, you'll need to make around 200 kills. The messages only start when you're rated 'competent' so here's a quick guide to those career-uplifting moves:

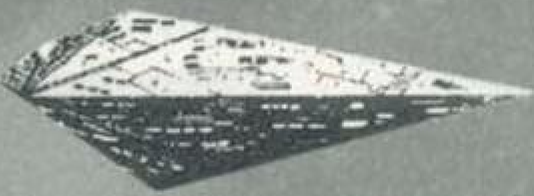
- Competent commanders need 3 Right on Commanders to make Dangerous.
- Dangerous commanders need 1 message to be assigned their First Mission.
- First Mission survivors need 3 messages to be sent on the Second Mission.
- Second Mission veterans need 2 Right on Commanders to be rated Deadly.
- Deadly commanders and archangels need 1 message to face their Third Mission
- 13 messages later and you are rated Elite.



Line up with ships leaving the space station for an easier entry through the docking bay doors.

Mystery cheat

If you're so darn clever that you've made it through to *Elite* in two days then how about this for a whirl? It only works for disk versions of the game I'm afraid.



1 Start the game as normal then go straight to the load/save screen.
2 Select the option LOAD NEW COMMANDER when prompted.
3 Input the commander's name as Elite and hit the enter key.
4 The message disk loading error will appear – don't fret it's supposed to do that.
5 Press 4 to exit the loading screen.
6 Press space to begin the game and be prepared for a big surprise.

Apart from giving you all sorts of things you normally don't have, this also seems to introduce some rather interesting little bugs into the game.



NB If you're using the cheat above don't save your games on to the *Elite* disk itself because it'll tend to corrupt your disk. You have been warned.



Combat tactics

Of all the things in *Elite*, some of the most crucial decisions are those of target identification. If you're a law-abiding space trader you don't want to start blasting pirates only to find that you've taken out a Viper police ship and the cops are after you in droves. So here's the *AA* guide to surviving combat situations.

- Asteroids usually appear just in front of you. They don't shoot but you can crash into them and they prevent you Torus-jumping. Blasting them earns you 0.5 credits

- Pirates have a tendency to appear in the top left hand corner of your scanner, if there are four or more unidentified ships then they're definitely pirates so let loose with the lasers.

- Once you've committed yourself to a fight with pirates, there are a few very effective techniques that can help push the kill rate up. Always try to take them from as far away as possible – use those missiles. If a pirate gets behind you then it's best to slow down, pull up and turn 180 degrees to get their rear-end in your forward gun sights. Speed up and with luck you can get on their tail and shoot at them in relative safety.

- When rumbling with Thargoids, relax and ignore those Thargons and go for the mother ship. Missiles, energy bombs and ECM's will have no effect so don't waste valuable fire power and time.

- When using an ECM to trash missiles, wait until it has almost hit you – that way you might well kill more than one bird with the ECM stone.

- The golden rule of combat situations, though, is to always have a hyperspace destination set up to escape to if things get too scary.



ADDER– Often used by smugglers, only carries one missile, so it is unlikely to use it on you.



ASP MK I – Galactic Navy vessel. These blighters are very fast and particularly manoeuvrable.



COBRA MK III – A good all rounder (it better be good 'cos it's yours).



FER-DE-LANCE – Completely self sufficient luxury ship.



KRAIT – Small but reliable one-man fighting machines.



PYTHON – Ugly, uncomfortable but large enough to carry loads of stuff.



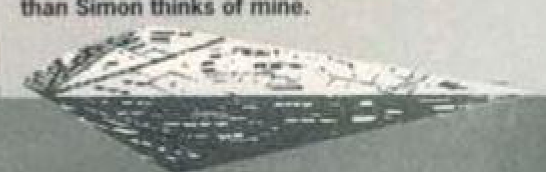
SIDEWINDER SCOUT SHIP – No hyperspace capabilities, mainly hangs around near planetary surfaces.



THARGOID INVASION SHIPS – Huge, fast and terrifying, each mother ship carries a number of remote control smaller fighters (worth a lot of money to the wrong people).



VIPER – Police ships, don't shoot at 'em unless you think less of your life than Simon thinks of mine.



Further reading...

If AA doesn't fulfil your appetite for Amstrad literature every month, here are a couple of other publications you might want to peruse. Dave browses through 'em.

Impact

PRICE: 50p
EDITOR: Tom Dean
ADDRESS: 53 High Lane, Burslem, Stoke-On-Trent, Staffordshire ST6 7DF.

FORMAT: A diskzine, available on 3-inch disk.

CONTENTS: A right weird mix of features we've got here (a bit like Simon's fizzog, really). Among the less unusual features are game reviews (pages and pages of them, in fact, including every game on Beau Jolly's *Big Box* compilation) and tips – in the issue we received here at the office there were a complete set of maps for *Bard's Tale*. Then there are a few PD games (all Simon Avery text adventures) and *The Plasma Demo* thrown into the mix. But oddest of all is the selection of short stories which seem to be the product of a mind not so much deranged as never having been arranged in the first place.

DESIGN: Minimal is the best way to describe it. The reviews and stories are just page after page of text that scroll on relentlessly. It really is crying out for a few pictures – especially in the game reviews. Okay, this might be tricky to achieve and would mean – horrors – doing a bit of coding so that you could combine sprites with word processed pages, but I reckon it would be worth it. Anyone want to give it a go?

Anyway, back to *Impact*. The menu system is easy-to-use, but there seems to be no way of escaping sections once you start reading them apart from getting to the far end or quitting, which can be annoying when you're reading something like the reviews section. But the maps are great and if you've got a printer you can even get hard copy of them.

COMMENTS: *Impact* ain't at all bad, just a bit dull to look at. The actual standard of writing is pretty darned good; the reviews are clear and concise but with a tendency to use what these teenagers of today call, I believe, 'hip language' – apparently, "One hell of a doss" means the game is good (personally I thought doss meant easy; I must be getting old). Actually, it was a really refreshing and unpretentious read which, while it had nothing much new to say, at least said it an individual way.



And there are more maps like these ones in Impact. In fact it's got a whole load of playing tips for Bard's Tale.

As for the short stories... er, well, I'm not really sure. They're certainly off the wall, but they left me more bemused than amused. At least they're something a bit different.

A good read if you persevere, but there's not much meat to it. The choice of PD was also a bit uninspired. Worth checking out at a mere 50p (plus a disk) but it needs to be more original in its choice of features if it's going to get people going back for more. The foundations are there.

BUY IT IF... You want to read dozens of short pithy reviews or want the maps to *Bard's Tale*.

Amstrad Contact



This one isn't exactly a fanzine – more of a club newsletter. But like WACCI, the the 'zine virtually is the club. Amstrad Contact is a CPC support group based in West Sussex, but it now has members as far afield as Scotland, so they're not choosy.

The newsletter is a pretty flimsy affair *that's a real pot-*pourri of items, snippets of info listings and bits'n'pieces swiped from the long-defunct *Bonzo's Scrapyard*.

It's all a bit ramshackle and thrown together, with no consistent style. There are some useful bits and pieces dotted around but it never really overcomes its newsletter roots.

We've heard very good reports about *Amstrad Contact* as a user group and CPC support service, so by all means get in touch (☎ 0403 753348). But don't expect too much from the newsletter. It's functional and useful, but not really very enjoyable.

CPC Now!

PRICE: £1.50
EDITOR: James Hockney
ADDRESS: 3 Saint Ethelwolds Close, Ely, Cambridgeshire CB6 3AX

FORMAT: A4

CONTENTS: It's a bit of a mini-*Amstrad Action*, really, with a mix of everything – game reviews, interviews with CPC-related companies, cheats, listings, serious software reviews, letters, a dead useful show diary, recipes for lobster thermidor... er, scrub that last one.

DESIGN: Though not as ambitious or original as some fanzines, *CPC Now!* is a well-designed 'zine, the best thing being that the text is very easy on the eye – there's none of that microscopic lettering and lines so close together the words merge nonsense here. It's intelligently illustrated, and the reproduction of the pictures is much better than average. Even the printing seems to have been done with a better quality potato than most other 'zines. A sideways logo, though – I wonder where the idea for that came from?



COMMENTS: *CPC Now!* comes courtesy of the entrepreneurial James Hockney and is one of the most readable 'zines around. It's also one of the fastest growing (in terms of page size if not readership). It might not be as outspoken as some 'zines but its unpretentious style works in its favour producing a reader-friendly mag. Don't take that as meaning it must be bland, though; *CPC Now!* simply concentrates more on facts and info than radical opinions. And because it casts its net so wide there's pretty much something to appeal to everyone (except hardened tech-heads).

Imitation is the best form of flattery, they say, in which case we feel very flattered. James might deny but quite a few of the sections do seem to have been 'inspired' by *AA*. But there's nowt wrong in that, is there?

BUY IT IF... If 12 issues of *Amstrad Action* a year just ain't enough for you.

Send us your wares

Further reading is going to become what we in the trade like to call 'a regular feature'. So if you want your 'zine or newsletter reviewed, or you've got any snippets of fanzine news for us, send it all along to: Further Reading, *Amstrad Action*, Future Publishing, 30 Monmouth Street, Bath, Avon BA1 2BW.

Street Rally

£2.75 cass ■ £4.50 3-inch disk ■ 3.5-inch disk ■ CPC Now! 3 St. Ethelwolds Close, Ely CB6 3AX ☎ 0353 663030

She might not know her sump from her big end, but Clur knows a thing or two about overhead racing games.



Nothing like a bit of day-for-night filming to make a racing game look bad (check out the film Witchfinder General for an even better example).

Talk about being a jack of all trades. James Hockney of *CPC Now!* is sticking his digits into so many pies at the moment he must have bought a family-sized pack of Findus fish fingers to leave himself a few extremities free to tap away on his CPC keyboard. Having already set himself up as a mail order software house, a CPC repairs business, a fanzine editor and hardware supplier, he's now gone into the games publishing business.

His first release is *Street Rally*, an overhead racer in the style of the classic *Slicks* from CodeMasters. With tiny little cars and a scrolling screen that follows your car around the long and windy track (that's windy as in bendy, not windy as in digestive problem).



The course you have to race around is even more twisty-turny than a particularly twisty-turny bendy thing.

At first sight it seems like you're not racing anyone else, but this is only because, for some reason, the other competitors have a serious head start on you. When you do finally meet them you'll have to fight hard to get past them 'cos they do their best to stop you. The best way to get past them is to overtake on the bends.

Damage repair

The difference between this and your usual racing game is the damage repair screen. As you drive through the odd bush, scrape the wing against a barn and overheat your engine all the damage you do is recorded. Then when your car finally gives up the ghost you have the chance to repair the various damaged bits so that you can carry on driving.

There are over 70 bits that could all need repairing and these are all displayed in a table. What you need to do is scroll through them looking for any meters that display over 80 per cent damage.



Pause on the ill bit of kit for a while and your repair team will get to work on that particular section of the car. The only problem is that there's usually more than one damaged bit to repair and only a limited amount of time allocated to your stay in the pits. If you don't manage to get all of them to read less than 80 then you get shoved out of the game and have to start all over again.

The main quibble I have with the game is the appallingly juddery scrolling (particularly evident when you slow down to take the corners – it reminds me of my Mum's driving). Graphically it's great – loads of bright colours, nice scenery, fab fluffy sheep standing around in the fields and dinky little cars – but I'd give all the colours in the world for a smoother scroll.

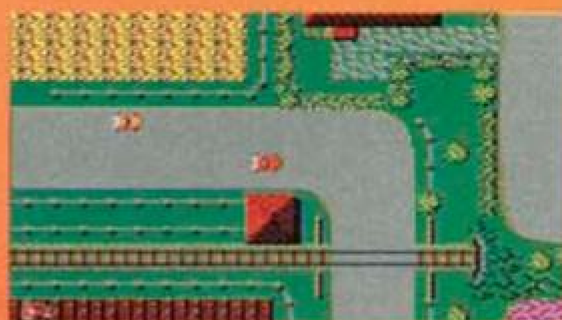
Sound criticism

Erm... I suppose at this point it's traditional review format to mention the sound effects. Apart from the fact that there aren't many to speak of, I'll just say that the guys from *Commodore Format* (they're in the office next door) thought their telly was blowing up, but it was only me playing *Street Rally*. 'Nuff said.

Street Rally reminds me of a driving game I played years ago on the BBC micro. Then I thought it was the best thing since sliced bread, but my only reference point at the time was *Pong*. Here in 1993 this new version is just a poorly-executed driving game.

It's annoying to see games like this – it's as if the programmers put so much effort into making the code look neat and tidy, that they can't be bothered sorting out the glitches. And there are plenty to sort out in *Street Rally*. For example, if you miss time a corner you could end up stuck in the hedges for the rest of your life and you can drive through other cars and find yourself imbedded in the side of a house.

The bottom line is that *Street Rally* isn't worth the money *CPC Now!* are asking for it. It's got potential, but frankly, it doesn't look like it's been finished. **Clur**



Trains don't seem to travel along the tracks so you're safe to just carry on going.



We had trouble telling the sheep from the puffs of smoke. How about you?

Second opinion

I remember playing this on a BBC micro in my lunch hour five years ago – it was nob then, too. I was merrily blipping 'round the course, until I realised I wasn't having any fun at all. Totally unimpressive. Simon

30%

VERDICT

GRAPHICS — **40%**
Bright and colourful, but some of the poorest scrolling I've ever seen.

SONICS — **34%**
A thupp, a vroom and a phut, not much too talk about really.

GRAB FACTOR — **42%**
It all looks fab, that is until you actually start to play.

STAYING POWER — **30%**
A prize for anyone that can stick it for more than one level.

RATING 37%

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Next Month

Q. What's the difference between this issue and Amstrad Action 102?
A. About four weeks.
Oh yeah, and a few other things as well. Wanna know what they are?

Right, well there are two ways you can find out. There's the easy way – you turn this page upside-down and read the answers – or there's the difficult but much more fun way – you actually do the wordsearch. We stuck in 22 words. If you find any more by all means write in and tell us. Not that we'll be impressed, mind, but if it makes you feel better, what the heck?

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Blow your mind with Amstrad Action 102

Answers:
CYBERNOID 2 (on next month's covertape), FLUFF (Radical's latest reviewed), SOUND FX (how to get the best noises out of your CPC), CHEAT MODE, LETTERS, TIPS, NEWS, REVIEWS, TYPE-INS, AMSTRAD, CLUR, ANDY, SIMON, DAVE, AA, 102, EUROPE, CPC, CPM, RUN, DATA, TAPE (Cybernoid 2 is on next month's, by the way).

From now on, AA will be out on the third Thursday of the month. That means that the March issue will be hitting the streets on:

Thursday 17th February 1994